



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>





Per 2333 d

16  
H3(2)[5]



















SECOND SESSION, FORTY-THIRD CONGRESS.

---

# EXECUTIVE DOCUMENTS

PRINTED BY ORDER OF

THE HOUSE OF REPRESENTATIVES.

1874-'75.

---

IN EIGHTEEN VOLUMES.

- Volume 1....No. 1, part 1, Foreign Relations.  
Volume 2....No. 1, part 2, War, (vol. 1.)  
Volume 3....No. 1, part 2, War, (vol. 2, part 1.)  
Volume 4....No. 1, part 2, War, (vol. 2, part 2.)  
Volume 5....No. 1, part 3, Navy; No. 1, part 4, Postmaster-General;  
and No. 7, Attorney-General.  
Volume 6....No. 1, part 5, Interior, (vol. 1.)  
Volume 7....No. 1, part 5, Interior, (vol. 2, Education.)  
Volume 8....No. 1, part 6, Commissioners of the District of Columbia; and No. 2, Finance Report.  
Volume 9....No. 3, Currency; and No. 4, Internal Revenue.  
Volume 10....No. 5; No. 6, and No. 150.  
Volume 11....No. 8 to No. 44, inclusive.  
Volume 12....No. 45 to No. 78, inclusive.  
Volume 13....No. 79 to No. 99, inclusive.  
Volume 14....No. 100, Coast Survey.  
Volume 15....No. 101 to No. 170, except Nos. 150 and 157.  
Volume 16....No. 157, Commercial Relations.  
Volume 17....No. 171, Commerce and Navigation.  
Volume 18....No. 172 to 180, inclusive.
- 

WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1875.



# INDEX



TO

## THE EXECUTIVE DOCUMENTS

OF THE

HOUSE OF REPRESENTATIVES OF THE UNITED STATES

FOR THE

SECOND SESSION OF THE FORTY-THIRD CONGRESS.

Subject.	Vol.	Part.	No.	Page.
Accident, letter from the Acting Secretary of the Treasury, relative to the, at Benning's Bridge, in which Treasury and national-bank notes were destroyed.....	15	.....	149	.....
Adjutant-General's Office, letter from the Secretary of War, transmitting the report of the freedmen's branch of the..	12	.....	59	.....
Agency, letter from the Secretary of the Interior, relative to the removal of the Weeminuche Indians.....	13	.....	97	.....
Alabama, message from the President of the United States, transmitting memorial of colored citizens of, relative to their civil rights .....	12	.....	46	.....
letter from the Secretary of War, showing the number of United States troops in, on November 3, 1874.....	14	.....	100	.....
Amendment, letter of the Secretary of the Treasury, transmitting draught of a bill to amend section 2997 of the Revised Statutes .....	12	.....	64	.....
Annuities, letter from the Secretary of the Interior, relative to an appropriation for Creek .....	13	.....	90	.....
Appropriations, letter from the Secretary of the Treasury, transmitting estimates of.....	10	.....	5	.....
index of the above .....	10	.....	5	255
tabular statements of disbursements made from the, for the Indian Department for the fiscal year ending June 30, 1874 .....	10	.....	6	.....
letter from the Secretary of the Interior, relative to an appropriation for the Columbia Hospital for Women and Lying-in Asylum.....	11	.....	11	.....
letter from the Secretary of War, calling attention to the omission in the Army appropriation bill of the item of \$10,000 for torpedo trials.....	11	.....	24	.....
letter from the same, recommending an appropriation to pay the claim of Dempsey & O'Toole .....	11	.....	29	.....
letter from the same, relative to an omission in the appropriation act of June 23, 1874, relative to printing the report of Lieut. George M. Wheeler.....	11	.....	32	.....

Subject.	Vol.	Part.	No.	Page.
Appropriations, letter from the Secretary of the Interior, transmitting estimates of appropriation required to meet obligations under existing contracts for transportation to various Sioux agencies.....	11	.....	35	.....
letter from the Secretary of War, relative to balances of appropriations for hospitals..	11	.....	37	.....
letter from the same, relative to the, for head-stones in national cemeteries.....	11	.....	39	.....
letter from the Secretary of the Interior, transmitting estimates of appropriations for subsistence and support of Northern Sioux Indians .....	11	.....	43	.....
letter from the same, transmitting estimates of appropriation to aid and instruct Indians of the Central Superintendency....	12	.....	49	.....
letter from the same, transmitting an estimate of appropriation for collecting and subsisting Apache Indians in Arizona....	12	.....	50	.....
letter from the same, recommending an appropriation from the annuities to the Cheyennes for support and education of two white female children captured from said Indians .....	12	.....	52	.....
letter from the same, transmitting an estimate of appropriation to remove the Modoc Indians from Oregon to the Indian Territory .....	12	.....	53	.....
letter from the Secretary of War, relative to the clause of the appropriation bill of June 23, 1874, which refers to the Rock Island bridge.....	12	.....	57	.....
letter from the Secretary of the Treasury, transmitting estimates of deficiency in...	12	.....	69	.....
letter from the Secretary of the Interior, relative to an amendment to the Indian appropriation bill for subsistence of Ute Indians.....	13	.....	88	.....
letter from the Secretary of the Interior, relative to an appropriation for Creek annuities .....	13	.....	90	.....
letter from the same, transmitting estimate of appropriation for subsistence and support of certain Indians in the Indian Territory .....	13	.....	91	.....
letter from the same, transmitting estimate of appropriation for a new safe for his Department.....	13	.....	93	.....
letter from the same, transmitting estimate of appropriation to pay claim of James W. Terrell.....	13	.....	98	.....
letter from the same, recommending an amendment to the Indian appropriation bill for Malheur reservation, Oregon.....	13	.....	99	.....
letter from the same, transmitting estimate of appropriation for Colorado Indian service.....	15	.....	102	.....
letter from the same, relative to an appropriation for repairs to the capitol building at Olympia, Washington Territory...	15	.....	104	.....
letter from the same, transmitting estimate of appropriation for completion of the new jail in the District of Columbia.....	15	.....	105	.....
letter from the Secretary of the Treasury, transmitting statements of balances of appropriations carried to the surplus fund required to be re-appropriated.....	15	.....	113	.....

Subject.	Vol.	Part.	No.	Page.
<b>Appropriations</b> , letter from the Secretary of War, relative to an appropriation for the improvement of Galveston Harbor, Texas.....	15	.....	115	.....
letter from the Secretary of War, relative to an appropriation for Rock Island arsenal.....	15	.....	116	.....
letter from the Acting Secretary of the Interior, relative to an estimate of appropriation to pay Osage Indians interest on avails of land sold under the treaty of 1865.....	15	.....	119	.....
letter from the Secretary of the Interior, transmitting estimate of appropriation for Indian service in Oregon.....	15	.....	120	.....
letter from the same, for the same in California.....	15	.....	121	.....
letter from the same, relative to an amendment to the Indian appropriation bill referring to the Choctaws.....	15	.....	122	.....
letter from the same, transmitting estimate of appropriation for Indian service in New Mexico.....	15	.....	123	.....
letter from the same, relative to an amendment to the Indian appropriation bill for certain incidental expenses in Oregon....	15	.....	124	.....
letter from the same, relative to an appropriation required for completing the purchase of the grounds surrounding Columbia Hospital.....	15	.....	128	.....
letter from the Secretary of War, transmitting statement showing expenditures for the contingent expenses of the military establishment for 1874.....	15	.....	130	.....
letter from the Secretary of the Interior, transmitting estimate of appropriations required to meet liabilities of the Indian service.....	15	.....	132	.....
letter from the Acting Secretary of the Interior, transmitting estimate of appropriations for Chippewa Indians of Lake Superior.....	15	.....	137	.....
letter from the same, relative to an estimate of appropriations required for the confederated tribes of the Kaskaskias, in Kansas.....	15	.....	140	.....
letter from the Secretary of the Interior, transmitting estimate of appropriations to pay certain members of the Kickapoo Indians.....	15	.....	141	.....
letter from the same, submitting an amendment to the Indian appropriation bill, to extinguish rights to hunt under treaty of April 29, 1868, with Sioux Indians.....	15	.....	144	.....
letter from the same, relative to a deficiency in appropriations for the ninth census.....	15	.....	155	.....
letter from the Secretary of War, relative to absence from appropriation bills of the item for expenses of surveys in the military divisions.....	15	.....	145	.....
<b>Arizona</b> , letter from the Secretary of War, relative to the bill (H. R. 2419) for military roads in.....	11	.....	19	.....
letter from the Secretary of the Interior, transmitting estimates of appropriation for Apache Indians in.....	12	.....	50	.....



Subject.	Vol.	Part.	No.	Page.
Arkansas, letter from the Attorney-General, relative to expenditures of the marshal's office of the western judicial district of .....	18	.....	175	.....
Armament, letter from the Secretary of War, relative to the future armament of permanent works, with an estimate to convert smooth-bores into rifles .....	11	.....	38	.....
message from the President, relative to the armament of fortifications, and the necessity for procuring heavy cannon.....	15	.....	126	.....
Army, letter from the Secretary of War, showing expenditures for the contingent expenses of the Army for 1874.....	15	.....	130	.....
letter from the same, relative to printing the catalogue of the Medical Museum of the .....	13	.....	83	.....
Arsenal, letter from the Secretary of War, relative to an appropriation for Rock Island.....	15	.....	116	.....
Attorney-General, annual report of the.....	5	.....	7	.....
Papers accompanying the above:				
Report of warden of United States jail.....	5	.....	7	37
Report of trustees of the Reform School of the District of Columbia.....	5	.....	7	45
Report of the Board of Metropolitan Police.....	5	.....	7	65
Attorney-General, transmits statement of contingent-fund expenses for year ending January 1, 1875.....	15	.....	106	.....
letter from the, showing what has been done to recover certain District Reform-School funds from Jay Cooke & Co.	15	.....	153	.....
letter from the, relative to the same.....	18	.....	172	.....
letter from the, transmitting facts relative to agents of the eastern band of Cherokee Indians .....	15	.....	169	.....
letter from the, relative to expenditures in the marshal's office of the western judicial district of Arkansas.....	18	.....	175	.....
Audit, board of, of the District of Columbia, message from the President, transmitting report of, relative to street-car companies.....	15	.....	170	.....
B.				
Baker, Lient. Frank, letter from the Secretary, transmitting memorial for relief of.....	15	.....	135	.....
Bank-notes, letter from the Acting Secretary of the Treasury, relative to destruction of, at Benning's Station.....	15	.....	149	.....
Barracks, letter from the Secretary of War, relative to the completion of, at Pensacola Harbor, Florida.....	12	.....	60	.....
Bay, letter from the Secretary of War, relative to Red Fish Bar, in Galveston.....	13	.....	96	.....
Breech-loading musket and carbine, letter from the Secretary of War, relative to the manufacture of the Roberts..	15	.....	152	.....
Breakwater, letter from the Secretary of War, transmitting estimates of the cost of a, at Cleveland, Ohio.....	12	4	75	.....
Bridge, letter from the Secretary of War, relative to the, over the Allegheny River, at Pittsburgh.....	11	.....	40	.....
letter from the same, relative to the appropriation for the Rock Island.....	12	.....	57	.....
report of the same, on the Saint Clair and Carondelet.....	11	.....	18	.....
Bridges, letter from the Secretary of War, relative to the bill to amend the act authorizing the construction of bridges across the Ohio River.....	11	.....	23	.....
Building, public, letter from the Secretary of the Treasury, relative to the erection of a, at Auburn, N. Y .....	12	.....	72	.....

Subject.	Vol.	Part.	No.	Page.
Burtch, Alexander, message from the President, vetoing bill for the relief of.....	15	.....	142	.....
C.				
California, letter from the Secretary of War, transmitting claims, account of the Modoc war, of citizens of.....	12	.....	45	.....
letter from the same, transmitting survey of the San Joaquin River, of .....	12	5	75	.....
letter from the same, relative to Camp Cook military reservation in.....	13	.....	80	.....
letter from the Secretary of the Interior, transmitting estimate of appropriation for Indian service in .....	15	.....	121	.....
letter from the same, relative to the Panoche Grande Rancho in .....	18	.....	180	.....
Canal, letter from the Secretary of War, showing receipts and expenditures of the Louisville and Portland.....	12	.....	77	.....
Capitol, letter from the Secretary of the Interior, relative to repairs on the, at Olympia, Wash.....	15	.....	104	.....
Carbine, letter from the Secretary of War, relative to the manufacture of the Roberts breech-loading musket and..	15	.....	152	.....
Casualties, letter from the Secretary of War, showing, in the war with Mexico.....	15	.....	118	.....
Catalogue, Descriptive Anatomical, letter from the Secretary of War, relative to printing the, of the Army Medical Museum.....	13	.....	83	.....
Cavalry, letter from the Secretary of War, relative to clothing lost by Company F, Third Regiment of.....	11	.....	28	.....
Cemeteries, letter from the Secretary of War, relative to headstones in national.....	11	.....	39	.....
Census, letter from the Secretary of the Interior, relative to an appropriation for the expenses of the ninth.....	15	.....	155	.....
Centennial Commission, message from the President, reporting progress made by the United States.....	15	.....	129	.....
Children, letter from the Secretary of the Interior, relative to the support of two white female, captured from the Cheyenne Indians.....	12	.....	52	.....
Cholera, epidemic in the United States in 1873, causes of...	13	.....	95	.....
Civil rights, message from the President, transmitting memorial of colored Alabamians, relative to their .....	12	.....	46	.....
Claims, letter from the Secretary of War, relative to Montana Indian war, of 1867.....	11	.....	9	.....
letter from the same, transmitting the, of citizens of California and Oregon, on account of the Modoc war.....	12	.....	45	.....
letter from the same, relative to Charles O. Woods..	12	.....	55	.....
letter from the same, relative to the claim of the Mission of Saint James, at Fort Vancouver, Wash.....	15	.....	117	.....
letter from the Secretary of the Interior, relative to the claims of the Absentee Shawnee Indians.....	12	.....	54	.....
letter from the same, transmitting ten reports of the surveyor-general of New Mexico, relative to private land.....	12	.....	62	.....
letter from the same, transmitting list of Indian depredations for ten years.....	12	.....	65	.....
letter from the same, relative to the claim of William P. Lyon & Son.....	13	.....	86	.....
letter from the Secretary of the Treasury, transmitting schedule of, allowed since June 30, 1874.....	15	.....	107	.....
letter from the Secretary of War, relative to Sugg Fort's.....	11	.....	34	.....
Clerks, letter from the Secretary of State, transmitting list of, in his Department.....	12	.....	68	.....

Subject.	Vol.	Part.	No.	Page.
Clerks, letter from the Postmaster-General, transmitting list of, in his Department.....	15	.....	112	.....
letter from the Secretary of War, transmitting list of, in his Department.....	18	.....	176	.....
Clothing, letter from the Secretary of War, relative to loss of, by soldiers of Fifth Cavalry.....	11	.....	28	.....
letter from the same, relative to loss of, by United States soldiers at Fort Sanders.....	15	.....	148	.....
letter from the same, relative to George A. Cowles & Co.'s mode of preserving.....	11	.....	17	.....
Coast Survey, annual report of the Superintendent of.....	14	.....	100	.....
Commerce and navigation, annual report of the Chief of the Bureau of Statistics on the, of the United States.....	17	.....	171	.....
contents of the above.....	17	.....	171	iii
Commercial relations of the United States, letter from the Secretary of State, transmitting report of the.....	16	.....	157	.....
Commission, United States Centennial, message of the President showing progress made by the.....	15	.....	129	.....
Commissioner of Patents, annual report of the.....	10	.....	150	.....
Comptroller of the Currency, annual report of the.....	9	.....	3	.....
Connecticut, letter from the Secretary of War, relative to the main channel of New Haven Harbor.....	15	.....	162	.....
Consular fees, message from the President, transmitting statement of fees collected by United States consuls and diplomatic officers.....	11	.....	8	.....
Contingent expenses, letter from the Secretary of State, showing amount of, in his Department.....	11	.....	30	.....
letter from the Secretary of War, showing amount of, in his Department.....	15	.....	130	.....
letter from the Attorney-General, showing amount of, in his Department.....	15	.....	106	.....
letter from the Secretary of the Navy, showing amount of, in his Department.....	12	.....	67	.....
Contracts, letter from the Secretary of War, showing the, made by his Department.....	15	.....	111	.....
letter from the Postmaster-General, showing contracts made in his Department for mail-boxes, keys, stationery, &c.....	15	.....	112	.....
Cooke, Jay & Co., letter from the Attorney-General, showing what has been done to recover certain District Reform-School funds from.....	15	.....	153	.....
letter from the same, relative to the same.....	18	.....	172	.....
Court-martial, letter from the Secretary of War, transmitting record of the, in Lieut. S. K. Thompson's case.....	15	.....	154	.....
Cowles & Co., George A., letter from the Secretary of War, accompanying report of investigation of preserving clothing from moth and mildew, originated by.....	11	.....	17	.....
Currency, annual report of the Comptroller of the.....	9	.....	3	.....
Customs-duties, letter from the Secretary of the Treasury, relative to construction of laws imposing.....	13	.....	82	.....
D.				
Dakota, letter from the Secretary of War, relative to the relief of certain settlers on Fort Randall military reservation, in.....	13	.....	79	.....
Defense, armament for sea-coast, message from the President, relating to.....	15	.....	126	.....

Subject.	Vol.	Part.	No.	Page.
Deficiencies, letter from the Secretary of the Treasury, transmitting estimates for certain.....	12	.....	69	.....
Dempsey & O'Toole, letter from the Secretary of War, recommending payment of.....	11	.....	29	.....
Depredations, letter from the Secretary of the Interior, transmitting list of claims for Indians.....	12	.....	65	.....
Destruction of Treasury and national-bank notes at Benning's Station, letter from the Acting Secretary of the Treasury relative to.....	15	.....	149	.....
Disbursements, tabular statement of, made for the Indian Department for the year ending June 30, 1874.....	10	.....	6	.....
District of Columbia, report of the Commissioners of.....	8	6	1	.....
annual report of the trustees of the Reform-School of.....	5	.....	7	47
annual report of the warden of the United States jail in.....	5	.....	7	39
letter from the Secretary of the Interior, relative to the Columbia Hospital for Women in the.....	11	.....	11	.....
letter from the same, relative to the United States jail in the.....	15	.....	105	.....
letter from the same, relative to purchasing grounds surrounding the Columbia Hospital in.....	15	.....	128	.....
letter from the same, relative to a building for female patients at the Insane Asylum in.....	15	.....	136	.....
letter from the Attorney-General, showing what has been done to recover from Jay Cooke & Co. funds belonging to the Reform-School in..	15	.....	153	.....
message from the President, transmitting report of the board of audit of, relative to certain street-railway companies.....	15	.....	170	.....
E.				
Education, annual report of Commissioner of.....	7	5	1	.....
Education of two white female children captured from the Cheyenne Indians, letter from the Secretary of the Interior relative to.....	12	.....	52	.....
Engineer Department, report of the, as to obstruction of San Jacinto River, Texas.....	15	.....	166	.....
Enlisted men in the Ordnance Bureau, letter from the Secretary of War, relative to the employment of.....	12	.....	58	.....
Epidemic cholera in the United States in 1873, causes of....	13	.....	95	.....
Examinations of the Saint Croix and Chippewa Rivers, letter from the Secretary of War transmitting reports of.....	12	6	75	.....
of the Withlacoochee, Oconee, Ocklockonnee, Hiawasse, Cahawba, and Black Warrior Rivers, letter from the same, transmitting reports of.....	12	7	75	.....
Exhibition, international, of 1876, message from the President, showing what is proposed to be exhibited at, by each executive department of the Government.....	15	.....	125	.....
Expenditures and receipts of the Louisville and Portland Canal, letter from the Secretary of War, showing the.....	12	.....	77	.....
of the marshal's office of the western judicial district of Arkansas, letter from the Attorney-General relative to.....	18	.....	175	.....
and receipts for the current fiscal year.....	11	.....	10	.....
Expenses, contingent, letter from the Secretary of State, showing amount of, in his Department.....	11	.....	30	.....

Subject.	Vol.	Part.	No.	Page.
Expenses contingent, letter from the Postmaster-General, showing amount of, in his Department.....	12	.....	48	.....
letter from the Secretary of the Treasury, showing amount of, in his Department.....	12	.....	70	.....
letter from the Secretary of the Interior, showing amount of, in his Department .....	13	.....	84	.....
letter from the Attorney-General, showing amount of, in his Department . . . . .	15	.....	106	.....
letter from the Secretary of War, showing amount of, in his Department.....	15	.....	130	.....
Fines and deductions imposed on mail contractors, letter from the Postmaster-General, transmitting list of.....	15	.....	151	.....
Fire, letter from the Secretary of War, relative to the loss of clothing by United States soldiers at Fort Sanders by...	15	.....	148	.....
Florida, letter from the Secretary of War, relative to barracks at Pensacola Harbor, in.....	12	.....	60	.....
letter from the same, relative to survey of Nassau River, in.....	11	10	75	.....
Foreign relations of the United States, message from the President, transmitting papers relative to the..	1	1	1	.....
list of papers contained in the above.....	1	1	1	xxx
index to the above.....	1	1	1	1223
Fort, Sugg, letter from the Secretary of War, relative to the claim of .....	11	.....	34	.....
Freedmen's branch of the Adjutant-General's Office, letter from the Secretary of War, transmitting report of.....	12	.....	59	.....
Funds, letter from the Secretary of the Interior, relative to certain, belonging to the Prairie band of Pottawatomie Indians.....	15	.....	139	.....
G.				
Gates and dams on the Ohio River, letter from the Secretary of War, relative to movable.....	12	.....	78	.....
Grasshoppers, message from the President, relative to Nebraska and Kansas sufferers by .....	15	.....	143	.....
H.				
Harbor, letter from the Secretary of War, relative to barracks and quarters at Pensacola .....	12	.....	60	.....
of Cleveland, Ohio, letter from the same, relative to a breakwater at .....	12	4	75	.....
at Galveston, Tex., letter from the same, relative to the improvement of.....	15	.....	115	.....
of Black River, Ohio, letter from the same, relative to the survey of.....	15	.....	159	.....
of Saint Joseph, Mich., letter from the same, relative to the condition of.....	15	.....	160	.....
and bar of Sabine Pass, Tex., letter from the same, relative to the improvement of .....	15	.....	161	.....
of New Haven, Conn., letter from the same, relative to the widening and deepening of.....	15	.....	162	.....
of Saint Mary's, Md., letter from the Secretary of the Navy, transmitting report of officers to report on expediency of establishing a naval coaling-station at .....	15	.....	108	.....
Harbors, letter from the Secretary of War, transmitting reports of the examinations and surveys of certain rivers and.....	12	2	75	.....

Subject.	Vol.	Part.	No.	Page.
Harbors, of New Bedford and Nantucket, Mass., letter from the same, relative to the .....	12	3	75	.....
of Crisfield and Leonardtown, Md., letter from the same, relative to surveys of the .....	12	8	75	.....
of Charlevoix and Monistique, Mich., letter from the same, relative to improvements of the .....	15	.....	164	.....
Haskins, Louisa A., letter from the Secretary of the Interior, relative to .....	15	.....	122	.....
Head-stones in national cemeteries, letter from the Secretary of War, relative to the appropriation for .....	11	.....	39	.....
Hinely, Lewis, message from the President, vetoing House bill granting a pension to .....	15	.....	168	.....
Hospital for Women, letter from the Secretary of the Interior, relative to the Columbia .....	11	.....	11	.....
at Hyannis, Mass., letter from the Secretary of War, relative to a pavilion .....	12	.....	63	.....
Columbia, letter from the Secretary of the Interior, relative to purchase of grounds surrounding the .....	15	.....	128	.....
for insane females, letter from the same, relative to a .....	15	.....	136	.....
Hospitals, letter from the Secretary of War, relative to balances of appropriations for .....	11	.....	37	.....
I.				
Idaho, letter from the Secretary of the Interior, relative to purchasing certain improvements on the Nez Percé Indian reservation in .....	15	.....	156	.....
Improvement of the channel of the Mississippi River opposite Saint Louis, letter from the Secretary of War relative to .....	15	.....	165	.....
Indian Department, tabular statement of disbursements for the .....	10	.....	6	.....
reservations, letter from the Secretary of the Interior, transmitting estimate of survey of .....	11	.....	21	.....
statements for year 1874-'75 .....	10	.....	6	.....
Indians, letter from the Secretary of the Interior, relative to transportation to Sioux agencies .....	11	.....	35	.....
letter from the same, relative to the removal of the Pawnee tribe of, to Indian Territory .....	11	.....	35	.....
letter from the same, relative to appropriations for subsistence of Northern Sioux .....	11	.....	43	.....
letter from the same, relative to appropriations for the Central Superintendency .....	12	.....	49	.....
letter from the same, relative to collecting and subsisting the Apache .....	12	.....	50	.....
letter from the same, relative to lands of the North Carolina .....	12	.....	51	.....
letter from the same, recommending the appropriation of \$3,000 for the support of two white female children captured from the Cheyennes .....	12	.....	52	.....
letter from the same, transmitting estimate of appropriations to remove the Modoc .....	12	.....	53	.....
letter from the same, recalling a previous report as to the claims of Absentee Shawnee .....	12	.....	54	.....
letter from the same, relative to the cutting of timber by, on reservations .....	12	.....	61	.....
letter from the same, relative to claims for depredations of, made in the last ten years .....	12	.....	65	.....
letter from the same, relative to the consolidation of certain tribes of, in Washington Territory .....	13	.....	87	.....
letter from the same, relative to subsistence for the Ute, in Colorado .....	13	.....	88	.....



Subject.	Vol.	Part.	No.	Page.
Indians, letter from the same, transmitting act of the Cherokee legislature authorizing a loan.....	13	.....	89	.....
letter from the same, relative to annuities for Creek.	13	.....	90	.....
letter from the same, relative to support of the Cheyenne, Arapaho, Apache, Kiowa, Comanche, and Wichita .....	13	.....	91	.....
letter from the same, relative to relief of certain tribes of, in Northern Superintendency .....	13	.....	92	.....
letter from the same, relative to removal of Weeminuche agency to the Ute reservation .....	13	.....	97	.....
letter from the same, relative to treaty of February 23, 1867, with certain Kansas.....	15	.....	101	.....
letter from the same, with estimate of appropriation for Indian service in Colorado.....	15	.....	102	.....
letter from the same, relative to the sale of a portion of Fond du Lac Indian reservation.....	15	.....	103	.....
letter from the same, with estimate of appropriation to pay interest to Osage.....	15	.....	119	.....
letter from the same, with estimate of appropriation for Indian service in Oregon.....	15	.....	120	.....
letter from the same, for the same, in California....	15	.....	121	.....
letter from the same, for the same, in New Mexico.	15	.....	123	.....
letter from the same, relative to Louisa Hawkins, a Choctaw Indian.....	15	.....	122	.....
letter from the same, relative to certain incidental expenses in Oregon.....	15	.....	124	.....
letter from the same, with estimate of appropriation to meet deficiencies on account of the Indian service.....	15	.....	132	.....
letter from the same, relative to support of the Lake Superior Chippewa.....	15	.....	137	.....
letter from the same, relative to removal to their reservation of Jicarilla, Apache, and Ute.....	15	.....	138	.....
letter from the same, relative to funds belonging to the Prairie band of Pottawatomie.....	15	.....	139	.....
letter from the same, relative to support of the confederated tribes of Kaskaskias.....	15	.....	140	.....
letter from the same, with estimate of appropriation for certain members of the Kickapoo.....	15	.....	141	.....
letter from the same, submitting amendment to appropriation bill for, relative to extinguishing certain rights to hunt allowed the Sioux.....	15	.....	144	.....
letter from the same, relative to purchasing certain improvements on the Nez Percé reservation.	15	.....	156	.....
letter from the Secretary of the Treasury, relative to liabilities of Choctaw tribe of .....	12	.....	47	.....
letter from the Secretary of War, relative to payment of claims of Montana Indian war.....	11	.....	9	.....
letter from the same, relative to claims of citizens on account of Modoc Indian war.....	12	.....	45	.....
letter from the same, transmitting cost to the Quartermaster and Commissary Departments of the Modoc war.....	15	.....	131	.....
letter from the Attorney-General, relative to agents of the Eastern band of Cherokee.....	15	.....	169	.....
Insane, letter from the Secretary of the Interior, relative to a new building for treatment of female.....	15	.....	136	.....
Interior, Secretary of the, annual report of, vol. 1 of.....	6	5	1	iii
Papers accompanying the above:				
Report of the Commissioner of the General Land-Office, vol. 1 of.....	6	5	1	1
Report of the Commissioner of Indian Affairs, vol. 1 of...	6	5	1	313
Report of the Commissioner of Pensions, vol. 1 of.....	6	5	1	651
Report of Superintendent of the Census, vol. 1 of.....	6	5	1	723
Report of the Architect of the Capitol Extension, vol. 1 of.....	6	5	1	733



Subject.	Vol.	Part.	No.	Page.
Interior, Secretary of the, papers accompanying annual report of—				
Report of Columbia Institution for the Deaf and Dumb, vol. 1 of.....	6	5	1	731
Report of the Government Hospital for the Insane, vol. 1 of.....	6	5	1	759
Report of the Columbia Hospital for Women and Lying-in Asylum, vol. 1 of.....	6	5	1	781
Report of the Freedmen's Hospital and Asylum, vol. 1 of.....	6	5	1	787
Report of the Commissioner of Education, vol. 2 of. ....	7	5	1	.....
Interior, Secretary of, letter relative to the Columbia Hospital for women .....	11	.....	11	.....
letter relative to the Burlington and Missouri River Railroad in Nebraska .....	11	.....	13	.....
letter relative to the Yellowstone Park .....	11	.....	20	.....
letter relative to survey of Indian reservations .....	11	.....	21	.....
letter relative to transportation for Sioux agencies.....	11	.....	35	.....
letter relative to removal of Pawnee Indians .....	11	.....	36	.....
letter relative to the Burlington and Missouri River Railroad in Nebraska .....	11	.....	42	.....
letter relative to support of Northern Sioux Indians.....	11	.....	43	.....
letter relative to support of Indians of Northern Superintendency .....	12	.....	49	.....
letter relative to support of Apache Indians .....	12	.....	50	.....
letter relative to lands of North Carolina Indians.....	12	.....	51	.....
letter relative to annuities to Cheyenne Indians .....	12	.....	52	.....
letter relative to removal of the Modoc Indians .....	12	.....	53	.....
letter relative to claims of Absentee Shawnee Indians .....	12	.....	54	.....
letter relative to certain Indians living on reservations and who are not allowed to cut timber thereon .....	12	.....	61	.....
letter transmitting report of surveyor-general of New Mexico.....	12	.....	62	.....
letter transmitting lists of claims for Indian depredations.....	12	.....	65	.....
letter transmitting expenditures of contingent fund in his Department .....	13	.....	84	.....
letter relative to geological surveys of the Territories.....	13	.....	85	.....
letter submitting revised estimates for the foregoing.....	13	.....	85	.....
letter relative to the claim of Wm. P. Lyon & Son.....	13	.....	86	.....
letter relative to the consolidation of certain Indian tribes in Washington Territory.....	13	.....	87	.....
letter relative to subsistence of Ute Indians in Colorado.....	13	.....	88	.....
letter transmitting a certain act of the Cherokee legislature .....	13	.....	89	.....
letter relative to Creek annuities .....	13	.....	90	.....
letter relative to support of Cheyenne, Arapahoe, Apache, Kiowa, Comanche, and Wichita Indians....	13	.....	91	.....
letter relative to relief of certain Indian tribes in Northern Superintendency.....	13	.....	92	.....

Subject.	Vol.	Part.	No.	Page.
Interior, Secretary of, letter relative to a new safe for his Department .....	13	.....	93	.....
letter relative to the removal of the Weeminuche Indian agency to Ute reservation .....	13	.....	97	.....
letter relative to balance due James W. Terrell .....	13	.....	98	.....
letter relative to Malheur reservation in Oregon .....	13	.....	99	.....
letter relative to treaty of February 23, 1867, with certain Indian tribes in Kansas .....	15	.....	101	.....
letter relative to the Colorado Indian service .....	15	.....	102	.....
letter relative to sale of a portion of Fond du Lac Indian reservation in Minnesota .....	15	.....	103	.....
letter relative to repairs on the capitol in Olympia, Washington Territory .....	15	.....	104	.....
letter relative to completion of the new jail in the District of Columbia .....	15	.....	105	.....
letter relative to interest due Osage Indians .....	15	.....	119	.....
letter relative to the Oregon Indian service .....	15	.....	120	.....
letter relative to the California Indian service .....	15	.....	121	.....
letter relative to Louisa Haskins .....	15	.....	122	.....
letter relative to the New Mexico Indian service .....	15	.....	123	.....
letter relative to certain incidental expenses in Oregon .....	15	.....	124	.....
letter relative to purchase of grounds surrounding Columbia Hospital .....	15	.....	128	.....
letter relative to liabilities on account of deficiencies in the Indian appropriations .....	15	.....	132	.....
letter relative to a new building for insane females .....	15	.....	136	.....
letter relative to support of Chippewa Indians of Lake Superior .....	15	.....	137	.....
letter relative to removal of Jicarilla Apache and Ute Indians to their reservation .....	15	.....	138	.....
letter relative to investment of certain funds belonging to the Prairie band of Pottawatomie Indians .....	15	.....	139	.....
letter relative to a payment to certain members of the Kickapoo tribe of Indians .....	15	.....	141	.....
letter relative to extinguishing certain rights to hunt granted the Sioux Indians .....	15	.....	144	.....
letter relative to expenses of the ninth census .....	15	.....	155	.....
letter relative to the purchase of certain improvements on the Nez Percé Indian reservation in Idaho .....	15	.....	156	.....
letter relative to the confederated tribes of the Kaskaskias in Kansas .....	15	.....	140	.....
letter relative to the Panoche Grande Rancho, in California .....	15	.....	180	.....
Internal Revenue, annual report of the Commissioner of...	9	.....	4	.....

Subject.	Vol.	Part.	No.	Page.
International Exhibition of 1876, message of the President, showing what is proposed to be exhibited at, by each Executive Department of the Government.....	15	.....	125	.....
J.				
Jail, letter from the Secretary of the Interior, relative to an appropriation for the new, in the District of Columbia.....	15	.....	105	.....
United States, annual report of the warden of the....	5	.....	7	39
Justice, contingent expenses of the Department of, communication from the Attorney-General, relative to .....	15	.....	106	.....
K.				
Kansas, letter from the Secretary of the Interior, relative to Absentee Shawnee Indians of.....	12	.....	54	.....
letter from the same, relative to treaty of February 23, 1867, with certain Indian tribes in.....	15	.....	101	.....
letter from the same, transmitting estimate of appropriation to pay certain members of the Kickapoo Indians in.....	15	.....	141	.....
letter from the Acting Secretary of the Interior, relative to an appropriation for confederated tribes of Kaskaskias in.....	15	.....	140	.....
message from the President, relative to issues of supplies to sufferers by grasshoppers in.....	15	.....	143	.....
Kentucky, letter from the Secretary of War, with report of receipts and expenditures of the Louisville and Portland Canal from June 11 to December 31, 1874.....	12	.....	77	.....
letter from the same, relative to survey of Rock-Castle and Big Sandy Rivers in.....	12	10	75	.....
L.				
Land-claims in New Mexico, private letter from the Secretary of the Interior, with reports of the surveyor-general of, on.....	12	.....	62	.....
Lands, letter from the Secretary of War, relative to lands required for improvement of Fox and Wisconsin Rivers..	12	.....	74	.....
Laws imposing customs duties, letter from the Secretary of the Treasury, on the construction of.....	13	.....	82	.....
Liabilities, letter from the Secretary of the Treasury, transmitting amount of, due from Choctaw Indians .....	12	.....	47	.....
Loan, letter from the Secretary of the Interior, transmitting act of Cherokee legislature relative to a.....	13	.....	89	.....
Long, Eli, Maj. Gen., letter of, to the Secretary of War, relative to retired officers.....	15	.....	147	.....
Lyon & Son, letter from the Secretary of the Interior, relative to the claim of, for printing Choctaw laws .....	13	.....	86	.....
M.				
Mail-contractors, letter from the Postmaster-General, transmitting list of fines and deductions imposed on.....	15	.....	151	.....
Mails, letter from the Postmaster-General, relative to smuggling merchandise through the.....	12	.....	66	.....
Maryland, letter from the Secretary of the Navy, transmitting report of board of officers appointed to inquire as to expediency of establishing a naval coaling station at Saint Mary's Harbor, in...	15	.....	108	.....
letter from the Secretary of War, relative to surveys of the harbors of Crisfield and Leonardtown in .....	12	8	75	.....

Subject.	Vol.	Part.	No.	Page.
Massachusetts, letter from the Secretary of War, relative to cost of erecting a pavilion hospital at Hyannis .....	12	.....	63	.....
letter from the same, transmitting reports of surveys of New Bedford and Nantucket Harbors, in .....	12	3	75	.....
Medicines, letter from the Commissioner of Patents, relative to patents on .....	18	.....	174	.....
Messengers, letter from the Secretary of War, relative to the employment in his Office of two additional .....	12	.....	56	.....
Metropolitan police, annual report of the board of .....	5	.....	7	65
Mexico, letter from the Secretary of War, showing troops engaged in war with, and casualties resulting .....	15	.....	118	.....
Michigan, letter from the Secretary of War, relative to granting right of way for public sewer through Fort Gratiot military reservation to city of Port Huron, in .....	11	.....	26	.....
letter from the same, relative to Saint Joseph Harbor, in .....	15	.....	160	.....
letter from the same, relative to improvements of the harbors of Charlevoix and Monistique, in .....	15	.....	164	.....
Military post, letter from the Secretary of War, relative to a new, near Carlin, Nevada .....	11	.....	16	.....
letter from the same, relative to the same .....	11	.....	33	.....
Military reservation, letter from the Secretary of War, relative to the Fort Kearney .....	11	.....	12	.....
letter from the same, relative to the amount of land included within the Fort Harker .....	15	.....	133	.....
Military roads, letter from the Secretary of War, relative to House bill for constructing, in Arizona .....	11	.....	19	.....
letter from the same, relative to construction from Green River City, Wyoming, to the Yellowstone National Park, and to Fort Ellis, Montana, of a .....	11	.....	22	.....
Militia, letter from the Secretary of War, giving abstract of the, in the United States .....	15	.....	146	.....
Mines and mining, report of Prof. R. W. Raymond on .....	18	.....	177	.....
Minnesota, letter from the Secretary of War, transmitting survey of the Minnesota River .....	12	.....	76	.....
letter from the Secretary of the Interior, relative to the sale of a portion of the Fond du Lac Indian reservation in .....	15	.....	103	.....
Mississippi River, message from the President, transmitting report of engineers on the reclamation of the alluvial basin of the .....	15	.....	127	.....
letter from the Secretary of War, relative to the examination of the mouth of the .....	11	.....	25	.....
Missouri, report of the Secretary of War, on the Saint Clair and Carondelet bridge in .....	11	.....	18	.....
Modoc war, letter of the Secretary of War, showing cost to the Quartermaster and Commissary Departments of the .....	15	.....	131	.....
Montana, letter from the Secretary of War, relative to the Indian war claims of 1867 of .....	11	.....	9	.....
letter from the same, relative to House bill for constructing military road from Green River City, Wyoming, to Fort Ellis, in .....	11	.....	22	.....
letter from the Secretary of the Interior, relative to the Yellowstone Park, in .....	11	.....	20	.....
Museum, letter from the Secretary of War, relative to printing catalogue of the Army Medical .....	13	.....	83	.....
Musket, Roberts's breech-loading, letter from the Secretary of War, relative to the manufacture of, at the Springfield Armory .....	15	.....	152	.....

Subject.	Vol.	Part.	No.	Page.
N.				
Navigation, letter from the Secretary of War, relative to the obstruction of, in the Ohio River.....	11	.....	41	.....
report of the Engineer Department, relative to obstructions to, in San Jacinto River, Texas.	15	.....	166	.....
Navy, annual report of the Secretary of the.....	5	3	1	
contents of the above .....	5	3	1	3
letter from the Secretary of, relative to contingent expenses of his Department.....	12	.....	67	.....
letter from the same, transmitting report of board of officers appointed to inquire into expediency of establishing a naval coaling-station at Saint Mary's River, Maryland .....	15	.....	108	.....
Nebraska, letter from the Secretary of War, relative to Fort Kearney, military reservation in.....	11	.....	12	.....
letter from the Acting Secretary of the Interior, relative to the Burlington and Missouri River Railroad in.....	11	.....	13	.....
letter from the Secretary of the Interior, relative to the same .....	11	.....	42	.....
letter from the same, relative to the removal of the Pawnee Indians from .....	11	.....	36	.....
message from the President, relative to supplies furnished sufferers by grasshoppers in.....	15	.....	143	.....
Nevada, letter from the Secretary of War, relative to establishing a new military post in, near Carlin...	11	.....	16	.....
letter from the same, relative to the same.....	11	.....	33	.....
New Mexico, letter from the Secretary of the Interior, relative to appropriations for military service in .....	15	.....	123	.....
letter from the same, relative to removal of Jicarilla, Apache, and Ute Indians in.....	15	.....	138	.....
New York, letter from the Secretary of the Treasury, relative to a public building at Auburn.....	12	.....	72	.....
letter from the Secretary of War, transmitting Lieut. Col. John Newton's report on the survey of Harlem River in.....	12	9	75	.....
North Carolina, letter from the Secretary of the Interior, relative to the lands of the Cherokee Indians in.....	12	.....	51	.....
letter from the Attorney-General, relative to agents of the eastern band of Cherokee Indians in .....	15	.....	169	.....
O.				
Obstructions to navigation, letter from the Secretary of War, relative to, in the Ohio River .....	11	.....	41	.....
report of the Engineer Department, relative to, in San Jacinto River, Texas .....	15	.....	166	.....
Officers, retired, letter from the Secretary of War, relative to the effect of H. R. 2093, on.....	15	.....	147	.....
Ohio, letter from the Secretary of War, relative to the House bill authorizing construction of bridges over the Ohio River .....	11	.....	23	.....
letter from the same, relative to obstructions of navigation in the Ohio River.....	11	.....	41	.....
letter from the same, relative to a breakwater in the harbor of Cleveland, in.....	12	4	75	.....
letter from the same, relative to hydraulic gates and dams in the Ohio River.....	12	.....	78	.....
letter from the same, relative to the survey of Black River Harbor, in.....	15	.....	159	.....

Subject.	Vol.	Part.	No.	Page.
Ohio letter from the same, relative to the survey of the old bed of Grand River in.....	15	.....	163	.....
Ordnance, letter from the Secretary of War, relative to heavy .....	11	.....	38	.....
Ordnance Bureau, letter from the Secretary of War, relative to the employment of enlisted men in .....	12	.....	58	.....
Ordnance Stores, letter from the Secretary of War, relative to the expense of sales of.....	18	.....	173	.....
Oregon, letter from the Secretary of War, transmitting claims of citizens of, on account of the Modoc war .....	12	.....	45	.....
letter from the same, transmitting survey of the Yamhill River in.....	12	5	75	.....
letter from the Secretary of the Interior, relative to appropriations for removing Modoc Indians from, to the Indian Territory.....	12	.....	53	.....
letter from the same, relative to Malheur reservation in .....	13	.....	99	.....
letter from the same, relative to appropriations for the Indian service in .....	15	.....	120	.....
letter from the same, relative to incidental Indian expenses in.....	15	.....	124	.....
Overflow, letter from the Secretary of War, relative to issues of supplies to sufferers from the, on the Lower Mississippi, Tombigbee, Warrior, and Alabama Rivers.....	11	.....	14	.....
P.				
Page, Frank A., letter from the Secretary of War, relative to the case of.....	15	.....	134	.....
Panoche Grande Rancho, letter from the Secretary of the Interior, relative to.....	18	.....	180	.....
Park, Yellowstone, letter from the Secretary of the Interior, relative to the.....	11	.....	20	.....
Patents, annual report of the Commissioner of.....	10	.....	150	.....
Patents, Commissioner of, letter from, relative to patents on medicines and chemical compounds .....	18	.....	174	.....
Pennsylvania, letter from the Secretary of War, relative to the bridge over the Alleghany River, at Pittsburgh, in.....	11	.....	40	.....
letter from the same, relative to Government property in Pittsburgh.....	11	.....	27	.....
Police, Metropolitan, annual report of the.....	5	.....	7	65
Portraits on currency and stamps, letter from the Secretary of the Treasury relative to.....	18	.....	178	.....
Postmaster-General, annual report of the.....	5	4	1	.....
contents of the above.....	5	4	1	3
appendix .....	5	4	1	31
contents of the appendix.....	5	4	1	4
letter from, transmitting report of contingent expenses of his Department.....	12	.....	48	.....
letter from, relative to smuggling merchandise through the mails.....	12	.....	66	.....
letter from, transmitting list of clerks in his employ, inventory of property, and contracts made.....	15	.....	112	.....
letter from, transmitting report of fines imposed upon and deductions made from pay of mail-contractors..	15	.....	151	.....
Post-Office Department, letter from the Assistant Treasurer of the United States, transmitting receipts and expenditures of the.....	11	.....	15	.....
President of the United States transmits annual message and accompanying documents .....	1	1	1	.....

Subject.	Vol.	Part.	No.	Page.
President of the United States, transmits list of papers contained in above relating to foreign affairs.....	1	1	1	xxx
index to the above ...	1	1	1	1223
transmits statement of consular and diplomatic fees collected.....	11	.....	8	.....
transmits memorial of colored citizens of Alabama.	12	.....	46	.....
transmits statement of what is proposed to be exhibited by the Executive Departments of the Government at the international exhibition of 1876.	15	.....	125	.....
transmits report of engineers for reclamation of the alluvial basin of the Mississippi.....	15	.....	127	.....
transmits report of progress made by the United States Centennial Commission .....	15	.....	129	.....
transmits his reasons for withholding approval of bill for relief of Alexander Burtch.....	15	.....	142	.....
transmits report of the board of audit relative to certain street-railway companies.....	15	.....	170	.....
message from, relative to armament for sea-coast defense .....	15	.....	126	.....
message from, relative to relief of sufferers by grasshoppers and drought in Nebraska and Kansas....	15	.....	143	.....
message from, giving his reasons for withholding approval of bill for relief of Lewis Hinely.....	15	.....	168	.....
Printing, letter from the Secretary of War, relative to printing the report of Lieut. George M. Wheeler.....	11	.....	32	.....
letter from the same, relative to printing catalogue of the Army Medical Museum.....	13	.....	83	.....
Property, letter from the Secretary of War, relative to property belonging to his Department, in Pittsburgh, no longer needed.....	11	.....	27	.....
letter from the Secretary, transmitting list of Government, now in his possession.....	11	.....	31	.....
R.				
Railroad, letter from the Acting Secretary of the Interior, relative to the Burlington and Missouri River.	11	.....	13	.....
letter from the Secretary of the Interior relative to the same.....	11	.....	42	.....
letter from the Secretary, relative to the refusal to carry troops by Morgan's Louisiana and Texas.....	13	.....	94	.....
message from the President, transmitting report of board of audit relative to certain street....	15	.....	170	.....
Raymond, R. W., Prof., report of, on mines and mining....	18	.....	177	.....



Subject.	Vol.	Part.	No.	Page.
Receipts and expenditures, letter from the Assistant Treasurer of the United States, relative to the Post-Office Department.....	11	.....	15	.....
letter from the Treasurer of the United States, transmitting his quarterly accounts of general, of the United States.....	18	.....	179	.....
list of, for the current fiscal year.....	11	.....	10	.....
Reform-School, annual report of the trustees of the.....	5	.....	7	45
letter from the Attorney-General, relative to the recovery from Jay Cooke & Co., of moneys belonging to the.....	15	.....	153	.....
letter from the same, relative to the same..	18	.....	172	.....
Reservations, letter from the Secretary of the Interior, relative to the survey of certain Indian .....	11	.....	21	.....
letter from the same, relative to the sale of certain, in Washington Territory .....	13	.....	87	.....
letter from the same, relative to the Malheur, in Oregon .....	13	.....	99	.....
letter from the same, relative to the sale of a portion of the Fond du Lac, in Minnesota..	15	.....	103	.....
letter from the Secretary of War, relative to the claim of the Mission of Saint James to the military, at Fort Vancouver, Washington Territory .....	15	.....	117	.....
letter from the Acting Secretary of the Interior, relative to removal of Jicarilla Apache and Ute Indians to their .....	15	.....	138	.....
letter from the Secretary of the Interior, relative to the purchase of certain improvements on the Nez Percé Indian, in Idaho.....	15	.....	156	.....
letter from the Secretary of War, relative to granting right of way for a public sewer to the city of Port Huron, Mich., through the Fort Gratiot military .....	11	.....	26	.....
letter from the same, relative to amending an act for the relief of certain settlers on the Fort Randall military.....	13	.....	79	.....
letter from the same, relative to Camp Cook military, in California.....	13	.....	80	.....
letter from the same, relative to the amount of land included in the Fort Harker military, in Kansas .....	15	.....	133	.....
Retired officers, letter from the Secretary of War, relative to the effect H. R. 2093 will have on certain.....	15	.....	147	.....
Revenue, Internal, annual report of the Commissioner of... ..	9	.....	4	.....
index to the above .....	9	.....	4	175
Revised Statutes, letter of the Secretary of the Treasury, relative to amending section 2997 of the.....	12	.....	64	.....
Rifle, royalty on the Allen or Springfield breech-loading, letter from the Secretary of War, relative to.....	13	.....	81	.....
Rivers, letter from the Secretary of War, relative to issues of supplies to sufferers from overflow of the Lower Mississippi, Tombigbee, Warrior, and Alabama .....	11	.....	14	.....
letter from the same, relative to amendment of the act authorizing construction of bridges over the Ohio .....	11	.....	23	.....
letter from the same, relative to the examination of the mouth of the Mississippi .....	11	.....	25	.....
letter from the same, relative to the bridge over the Allegheny, at Pittsburgh.....	11	.....	40	.....
letter from the same, relative to obstruction of navigation of the Ohio.....	11	.....	41	.....

Subject.	Vol.	Part.	No.	Page.
Rivers, letter from the same, relative to land required for the improvement of the Fox and Wisconsin.....	12	.....	74	.....
letter from the same, transmitting reports of surveys and examinations, as follows; Wolf Lake Cut, Indiana; Sebawing River and mouth of Saginaw River, Michigan; Grand Marias Harbor, Lake Superior, Minnesota; Dakota River, Dakota; estuary in Santa Barbara Channel, near Point Muger; Sacramento River, below Tehama, and Feather River, below Marysville, Cal.....	12	1	75	.....
letter from the same, transmitting reports of the examination and surveys of certain.....	12	2	75	.....
letter from the same, transmitting reports of surveys of San Joaquin, California, and Yamhill, Oregon.....	12	5	75	.....
letter from the same, transmitting reports of examinations of the Saint Croix and Chippewa.....	12	6	75	.....
letter from the same, transmitting reports of examinations of the Withlacoochee, Oconee, Ocklockonee, Hiawassee, Cahawba, and Black Warrior...	12	7	75	.....
letter from the same, transmitting surveys of Little Kanawha, Guyandotte, and Twelve Pole, West Virginia.....	12	8	75	.....
letter from the same, relative to improvement of Harlem, New York.....	12	9	75	.....
letter from the same, relative to surveys of rivers in Kentucky and Florida.....	12	10	75	.....
letter from the same, relative to the survey of the Minnesota.....	12	.....	76	.....
letter from the same, relative to the use of hydraulic gates and dams on the Ohio.....	12	.....	78	.....
letter from the same, relative to a survey of the mouth of the Mississippi.....	15	.....	114	.....
letter from the same, relative to the same.....	15	2	114	.....
letter from the same, relative to a shoal in the Hudson, opposite Jersey City.....	15	.....	158	.....
letter from the same, relative to the survey of the harbor of Black, in Ohio.....	15	.....	159	.....
letter from the same, relative to the survey of the old bed of Grand, in Ohio.....	15	.....	163	.....
letter from the same, relative to the improvement of the channel of the Mississippi, opposite Saint Louis.....	15	.....	165	.....
letter from the same, relative to the improvement of the Tennessee and Holston.....	15	.....	167	.....
message of the President, transmitting reports of engineers for the reclamation of the alluvial basin of the Mississippi.....	15	.....	127	.....
Road, military wagon, in Wyoming and Montana, letter of the Secretary of War, relative to.....	11	.....	22	.....
Royalty on the Allen, or Springfield, breech-loading rifle, letter of the Secretary of War, relative to.....	13	.....	81	.....
S.				
Safe, letter from the Secretary of the Interior, relative to the purchase of a new, for his Department.....	13	.....	93	.....
Sea-coast defenses, message of the President, relative to....	15	.....	126	.....
Seamen, letter from the Secretary of State, showing number of, receiving certificates of citizenship during the year.	11	.....	44	.....
Smuggling through the mails, letter from the Postmaster-General, relative to.....	12	.....	66	.....
State, Secretary of, transmits statement of fees collected by consular and diplomatic officers.....	11	.....	8	.....
transmits statement of use of contingent fund in his Department.....	11	.....	30	.....

Subject.	Vol.	Part.	No.	Page.
State, Secretary of, transmits inventory of United States property in his possession.....	11	.....	31	.....
transmits abstract of collectors' returns, showing number of registered seamen receiving certificates of citizenship during the year .....	11	.....	44	.....
transmits list of clerks in his Department .....	12	.....	68	.....
Statements, Indian, for year 1874-'75.....	10	.....	6	.....
Stationery, letter of the Postmaster-General, transmitting contracts for, in his Department .....	15	.....	112	.....
Statistics, annual report of the Chief of Bureau of, on the commerce and navigation of the United States. ....	17	.....	171	.....
contents of the above .....	17	.....	171	iii
Survey, Coast, annual report of the Superintendent of the..	14	.....	100	.....
Surveys, letter from the Secretary of the Interior, relative to the geographical and geological, in the Territories of the United States.....	13	2	85	.....
letter from the Secretary of War, relative to, west of the 100th meridian.....	15	.....	109	.....
letter from the same, relative to, in the military divisions and departments.....	15	.....	145	.....
T.				
Tennessee, letter from the Secretary of War, relative to survey of the Tennessee and Holston Rivers in.....	15	.....	167	.....
Terrell, James W., letter from the Secretary of the Interior, relative to the claim of. ....	13	.....	98	.....
Territories, letter from the Secretary of the Interior, relative to the geological survey of the .....	13	1	85	.....
letter from the same, submitting estimates for the continuation of the geological and geographical survey of the.....	13	2	85	.....
Texas, letter from the Secretary of War, relative to Red Fish Bar, Galveston Bay, in .....	13	.....	96	.....
letter from the same, relative to the navigation of Saline Pass in.....	15	.....	161	.....
report of the Engineer Department, relative to obstructions in San Jacinto River in.....	15	.....	166	.....
Thompson, S. K., letter from the Secretary of War, relative to the case of.....	15	.....	154	.....
Timber, letter from the Secretary of the Interior, relative to the necessity of legislation in behalf of Indians living on reservations who are not allowed to cut timber thereon.	12	.....	61	.....
Torpedo trials, letter from the Secretary of War, relative to an appropriation for.....	11	.....	24	.....
Transportation of troops, letter from the Secretary of the Treasury relative to amounts paid land-grant railroads for .....	12	.....	73	.....
Treasury, Secretary of the, annual report of.....	8	.....	2	.....
index to the above.....	8	.....	2	739
transmits estimates of appropriations for next fiscal year...	10	.....	5	.....
index to the above.....	10	.....	5	255
transmits amounts of liabilities due from the Choctaw Indians to individuals.....	12	.....	47	.....
transmits draft of a bill to amend section 2997 of the Revised Statutes.....	12	.....	64	.....
transmits estimates of deficiencies of appropriations for the current year and prior years.	12	.....	69	.....
transmits statement of the contingent fund of his Department .....	12	.....	70	.....

Subject.	Vol.	Part.	No.	Page.
Treasury, Secretary of the, transmits names of persons employed in the Coast Survey..	12	.....	71	.....
Assistant, transmits receipts and expenditures of the Post-Office Department.....	11	.....	15	.....
letter from, relative to public buildings at Auburn, N. Y....	12	.....	72	.....
letter from, relative to amount of money paid land-grant railroads for transporting troops.	12	.....	73	.....
letter from, relative to construction of laws imposing customs-duties .....	13	.....	82	.....
transmits schedule of claims allowed under the act of July 4, 1864.....	15	.....	107	.....
transmits statement showing amount of money carried to the surplus-fund required to be re-appropriated.....	15	.....	113	.....
Acting, letter from, relative to the amount of Treasury notes and national-bank notes destroyed in the accident on the Baltimore and Potomac Railroad near Benning's Station..	15	.....	149	.....
letter from, relative to portraits printed on currency and stamps .....	18	.....	178	.....
Troops, letter from the Secretary of the Treasury, relative to the amount paid land-grant railroads for transportation of.....	12	.....	73	.....
letter from the Secretary of War, relative to the refusal of Morgan's Louisiana and Texas Railroad to transport military supplies and.....	13	.....	94	.....
letter from the same, showing number of, stationed in Alabama on November 3, 1874.....	15	.....	110	.....
U.				
United States, letter from the Secretary of War, transmitting abstracts of the militia force of the .....	15	.....	146	.....
annual report of the Chief of the Bureau of Statistics on the commerce and navigation of the.....	17	.....	171	.....
causes of epidemic cholera in the, in 1873....	13	.....	95	.....
V.				
Veto, by the President, of bill for the relief of Alexander Burch.....	15	.....	142	.....
of bill for the relief of Lewis Hinely.	15	.....	168	.....
W.				
War, annual report of the Secretary of, (vol. 1 of).....	2	2	1	iii
Papers accompanying the above:				
Report of the General of the Army, (vol. 1 of).....	2	2	1	3
Report of the Adjutant-General, (vol. 1 of).....	2	2	1	67
Report of the Inspector-General, (vol. 1 of).....	2	2	1	93
Report of the Quartermaster-General, (vol. 1 of).....	2	2	1	105
Report of the Commissary-General of Subsistence, (vol. 1 of) .....	2	2	1	223
Report of the Paymaster-General, (vol. 1 of).....	2	2	1	243
Report of the Chief of Ordnance, (vol. 1 of).....	2	2	1	255
Report of the Chief Signal-Officer, (vol. 1 of).....	2	2	1	421

Subject.	Vol.	Part.	No.	Page.
War, Secretary of, papers accompanying annual report of—				
Report of the Chief of Engineers, (vol. 2, part 1, of)....	3	2	1	3
Appendixes to the report of the Chief of Engineers, (vol. 2, part 2, of).....	4	2	1	3
Index to the last report .....	4	2	1	899
War, Secretary of, letter relative to Montana Indian war- claims of 1867.....	11	.....	9	.....
letter relative to Fort Kearney military reservation .....	11	.....	12	.....
letter relative to issue of supplies to sufferers from overflow of southern rivers .....	11	.....	14	.....
letter relative to the establishment of a new military post near Carlin, Nev ...	11	.....	16	.....
letter relative to construction of military roads in Arizona.....	11	.....	19	.....
letter relative to the construction of a military wagon-road from Green River City, Wyo., to Fort Ellis, Mont..	11	.....	22	.....
letter relative to the act authorizing construction of bridges on the Ohio River .....	11	.....	23	.....
letter relative to torpedo-trials .....	11	.....	24	.....
letter relative to examination of the mouth of the Mississippi River.....	11	.....	25	.....
letter relative to granting the right of way to the city of Port Huron, Mich., for a public sewer through Fort Gra- tiot military reservation.....	11	.....	26	.....
letter relative to useless property in Pittsburgh belonging to his Depart- ment.....	11	.....	27	.....
letter relative to clothing lost by enlisted men of the Third Cavalry .....	11	.....	28	.....
letter relative to the claim of Dempsey & O'Toole.....	11	.....	29	.....
letter relative to printing Lieut. George M. Wheeler's report.....	11	.....	32	.....
letter relative to a new military post near Carlin, Nev.....	11	.....	33	.....
letter relative to the claim of Sugg Fort..	11	.....	34	.....
letter relative to balances of appropri- ations for hospitals for 1872-'73 and 1873-'74 .....	11	.....	37	.....
letter relative to heavy ordnance and the future armament of permanent works.....	11	.....	38	.....
letter relative to head-stones in national cemeteries.....	11	.....	39	.....
letter relative to the bridge over the Allegheny, at Pittsburgh, Pa.....	11	.....	40	.....
letter relative to obstruction of the Ohio River .....	11	.....	41	.....
letter relative to Charles O. Wood's claim.....	12	.....	55	.....
letter relative to the employment of ad- ditional messengers in his office .....	12	.....	56	.....
letter relative to the appropriation for Rock Island bridge .....	12	.....	57	.....
letter relative to employment of enlisted men in the Ordnance Bureau.....	12	.....	58	.....
letter relative to a pavilion hospital at Hyannis, Mass.....	12	.....	63	.....
letter relative to lands for improvement of the Fox and Wisconsin Rivers.....	12	.....	74	.....
letter relative to Camp Cook military reservation in California .....	13	.....	80	.....

Subject.	Vol.	Part.	No.	Page.
War, Secretary of, letter relative to royalty on the Allen or Springfield breech-loading rifle and cartridge .....	13	.....	81	.....
letter relative to printing catalogue of the Army Medical Museum.....	13	.....	83	.....
letter relative to Red Fish Bar, Galveston Bay.....	13	.....	96	.....
letter relative to continuance of explorations and surveys west of the one hundredth meridian.....	15	.....	109	.....
letter relative to survey of the mouth of the Mississippi River.....	15	.....	114	.....
letter relative to the same.....	15	2	114	.....
letter relative to Galveston Harbor, Tex.	15	.....	115	.....
letter relative to an appropriation for Rock Island Arsenal .....	15	.....	116	.....
letter relative to the claim of Saint James Mission to Fort Vancouver military reservation.....	15	.....	117	.....
letter relative to the boundaries of Fort Harker reservation.....	15	.....	133	.....
letter relative to the case of Frank A. Page .....	15	.....	134	.....
letter relative to appropriations for surveys in the military divisions and departments .....	15	.....	145	.....
letter relative to clothing lost by United States soldiers, by fire, at Fort Sanders, Wyoming.....	15	.....	148	.....
letter relative to the manufacture of the Roberts breech-loading musket and carbine.....	15	.....	152	.....
letter relative to a shoal in the Harlem River opposite Jersey City.....	15	.....	158	.....
letter relative to the survey of Black River Harbor, Ohio .....	15	.....	159	.....
letter relative to Saint Joseph Harbor, Michigan .....	15	.....	160	.....
letter relative to the survey of the old bed of Grand River, Ohio.....	15	.....	163	.....
letter relative to the improvement of the channel of the Mississippi River opposite Saint Louis.....	15	.....	165	.....
letter relative to the expense of sales of ordnance stores.....	18	.....	172	.....
transmits report of officers to examine process of George A. Cowles for preservation of clothing.....	11	.....	17	.....
transmits report on the Saint Clair and Carondelet bridge.....	11	.....	18	.....
transmits claims of California and Oregon on account of the Modoc war.....	12	.....	45	.....
transmits report of the Freedmen's branch of the Adjutant-General's office.....	12	.....	59	.....
transmits proposed resolutions for completion of barracks and quarters at Pensacola Harbor, Florida.....	12	.....	60	.....
transmits reports of surveys of Wolf Lake Cut, Indiana; Sebewaing River and mouth of Saginaw River, Michigan; Grand Marais Harbor, Lake Superior, Minnesota; Dakota River, Dakota; estuary in Santa Barbara Channel, near Point Muger, Sacramento River, below Tehama, and Feather River, below Marysville, Cal .....	12	1	75	.....

Subject.	Vol.	Part.	No.	Page.
War, Secretary of, transmits reports of surveys of certain rivers and harbors in Maine, New Hampshire, and Massachusetts .....	12	2	75	.....
transmits reports of surveys of harbors of New Bedford and Nantucket, Mass. ....	12	3	75	.....
transmits report of cost of breakwater at Cleveland Harbor, Ohio .....	12	4	75	.....
transmits reports of surveys of San Joaquin River, California, and Yamhill River, Oregon .....	12	5	75	.....
transmits reports of examinations of Saint Croix and Chippewa Rivers .....	12	6	75	.....
transmits reports of examinations of Withlacoochee, Oconee, Ocklockonee, Hiawassee, Cahawba, and Black Warrior Rivers .....	12	7	75	.....
transmits reports of surveys of harbors of Crisfield and Leonardtown, Md.; and Little Kanawha, Guyandotte, and Twelve Pole Rivers, West Virginia....	12	8	75	.....
transmits Lieut. Col. John Newton's survey of Harlem River, New York .....	12	9	75	.....
transmits reports of surveys of Rock Castle and Big Sandy Rivers, Kentucky, and Nassau River, Florida .....	12	10	75	.....
transmits report of survey of the Minnesota River .....	12	.....	76	.....
transmits report of engineers on applicability of hydraulic gates and dams in the Ohio River .....	12	.....	78	.....
transmits amendment of the act for the relief of settlers on Fort Randall reservation .....	13	.....	79	.....
transmits report of refusal of Morgan's Louisiana and Texas Railroad to transport United States troops and supplies.	13	.....	94	.....
transmits report showing number of United States troops in Alabama on November 3, 1874 .....	15	.....	110	.....
transmits statement of contracts made by his Department during 1874 .....	15	.....	111	.....
transmits report of troops engaged in the Mexican war, and their losses .....	15	.....	118	.....
transmits statement showing contingent expenses of his Department .....	15	.....	130	.....
transmits cost to the Quartermaster and Commissary Departments of the Modoc war .....	15	.....	131	.....
transmits memorial of Lieut. Frank Baker .....	15	.....	135	.....
transmits abstract of the militia force of the United States .....	15	.....	146	.....
transmits letter of Maj. Gen. Eli Long, retired .....	15	.....	147	.....
transmits copy of the record of the court-martial of Lieut. S. K. Thompson	15	.....	154	.....
transmits report on the harbor and bar of Sabine Pass, Texas .....	15	.....	161	.....
transmits report on the widening and deepening the main channel of New Haven Harbor, Connecticut .....	15	.....	162	.....
transmits reports on the harbors of Charlevoix and Monistique, Michigan .....	15	.....	164	.....
transmits reports of surveys of the Tennessee and Holston Rivers .....	15	.....	167	.....

Subject.	Vol.	Part.	No.	Page.
War, Secretary of, transmits list of clerks and others employed in his Department.....	18	.....	176	.....
West Virginia, letter from the Secretary of War, relative to surveys of the Little Kanawha, Guyandotte, and Twelve Pole Rivers, in.....	12	8	75	.....
Wheeler, George M., letter from the Secretary of War, relative to printing the report of.....	11	.....	32	.....
letter from the same, relative to continuing explorations and surveys west of the 100th meridian.....	15	.....	109	.....
Wisconsin, letter from the Secretary of War, relative to improvement of the Fox and Wisconsin Rivers in.....	12	.....	74	.....
Wood, Charles O., letter from the Secretary of War, relative to the claim of.....	12	.....	55	.....
Wyoming, letter from the Secretary of War, relative to the construction of a military wagon-road in.....	11	.....	22	.....
letter from the same, relative to clothing lost by fire, by United States soldiers at Fort Sanders, in.	15	.....	148	.....





REPORT  
OF THE  
SECRETARY OF THE NAVY;

BEING PART OF  
THE MESSAGE AND DOCUMENTS

COMMUNICATED TO THE  
TWO HOUSES OF CONGRESS

AT THE  
BEGINNING OF THE SECOND SESSION OF THE FORTY-THIRD CONGRESS.



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1874.



# CONTENTS

---

	Page.
Report of the Secretary.....	5
Cruising stations.....	6
Virginus affair.....	9
Yellow fever at Pensacola.....	11
Naval drill at Key West.....	11
Public marine-schools .....	13
Vienna exposition.....	13
Icelanders, Alaska.....	14
Interoceanic ship-canal .....	15
Transit of Venus.....	16
Hydrographic Office.....	16
Ocean surveys.....	17
Navy-yards .....	19
Ordnance .....	20
Torpedoes .....	21
Marine Corps.....	21
Naval pension-fund.....	22
Estimates and expenditures.....	22
Condition and improvement of the Navy.....	23

## SUPPLEMENT.

Expenditures of Navy appropriations.....	25
Movements of vessels on the stations.....	25

## APPENDIX.

No. 1. Estimates Secretary's Office, &c.....	37
2. Naval Academy.....	37
report of Board of Visitors.....	37
report of Superintendent.....	44
reports of practice-cruises.....	44
3. Bureau of Equipment and Recruiting.....	57
4. Bureau of Navigation, with reports of Naval Observatory, Hydrographic Office, &c .....	59
5. Bureau of Yards and Docks.....	74
6. Bureau of Ordnance .....	80
7. Bureau of Medicine and Surgery.....	86
8. Bureau of Provisions and Clothing.....	99
9. Bureau of Steam-Engineering.....	101
10 Bureau of Construction and Repair.....	156
11. Marine Corps.....	172
12. Landing of detachments at Honolulu.....	180
13. Meritorious services and conduct.....	197
14. Report of Admiral Porter.....	198



# REPORT OF THE SECRETARY OF THE NAVY.

---

NAVY DEPARTMENT,  
*Washington, D. C., December 1, 1874.*

SIR: The following report of the present condition of the Navy and its operations during the present year is respectfully submitted:

## VESSELS OF THE NAVY.

One year ago the Navy consisted of 165 vessels of all classes, armed with 1,269 guns, exclusive of howitzers. Since that time there have been added to it 8 new steam-sloops, 2 torpedo-vessels, and 1 dispatch-boat, and it has been diminished by the sale of 2 wooden and 11 light-draught iron vessels, leaving as the present number 163 vessels with 1,254 guns, the armament having been slightly increased by the increase in the number of guns on the new ships. Of this whole number, 26 have sail-power only, and of these four are to be placed at the disposal of State and local authorities as school and training ships, under the direction of the act of Congress, providing for such disposition. Seven are in use only as receiving-ships; 2 are old line-of-battle ships, which have been on the stocks for many years, and 8 are of old type and in bad condition, and can be used only for barracks or stationary school-ships; leaving 5 which can be put to practical use at sea as store-ships transports, or surveying-vessels.

Our steam-navy consists of 137 vessels of all classes and in every condition. Of this number, 25 are tugs, used with one or two exceptions for yard purposes; 37 are armored vessels, and 2 are torpedo-boats, leaving 73 steam-vessels originally of a class adapted for cruising. These are classified at present as follows: First-rate, 5 vessels, 188 guns, 15, 163 tons; second-rate, 31 vessels, 510 guns, 57,528 tons; third-rate, 31 vessels, 183 guns, 18,956 tons; fourth-rate, 6 vessels, 21 guns, 3,183 tons; making a total of 73 vessels, 902 guns, including howitzers, and 94,830 tons.

Of the iron-clad or armored vessels, 16 are of a class and in condition for actual and efficient service; 4 others, of the class of powerful double-turreted monitors, are actually in hand undergoing repair, and the fifth is well worth the same attention; but the remainder may be counted as really useless for any active and efficient purpose. Four

of the largest of them, designed and commenced during the war, have never been launched, and consist, in fact, only of their wooden frames, still on the stocks, and their incomplete plating and machinery stored at the navy-yards, though their names and designed dimensions appear on the Navy list; and the remaining 12, of the class known as light-draught monitors, not able to carry their turrets, guns, and munitions of war, are valuable only as old material. Of the 73 steam-cruising-vessels, 5, of over 2,000 tons each, have remained on the stocks since the war, never having been launched, and are not estimated to be worth, for our purposes, the cost of completion; 7 are condemned and laid up in ordinary as unfit for further use; 3 others with condemned machinery; and 41 are in commission for various duty. Of the remaining 17, upon which we must rely to take the place of the cruising-vessels as they return home and are put out of commission, 2 are laid up ready for service, 7 are repairing at the various navy-yards, and 8 are building under special appropriations of Congress.

Thus it will be seen that one-half of the steam-navy adapted to cruising is in commission and in actual service. This number of vessels cannot be prudently diminished; but if it is to be maintained, there should be a gradual and constant addition to the Navy to supply the places of those which are each year found to be worn out and unfit for further service, and for this purpose a fixed amount of tonnage should be built every year. This amount may be small, but it should be constant and unfailing. To this end the Department has accumulated a large amount of live-oak timber in the various navy-yards, where it will yearly improve in condition and be available as the very best material for the frames of any ships it may at any time be necessary or desirable to build.

The rapid and almost complete disappearance of this most valuable ship-timber from our shores, (large quantities being sent abroad,) should arrest the attention of Congress, and measures should be taken to secure what remains. It is the growth of centuries, and once lost will never be regained.

#### CRUISING-STATIONS.

No change has been made during the year in the number or designation of the cruising-stations, which comprise six separate commands, although, in consequence of threatened disturbances of our friendly relations with Spain, the whole of the force was temporarily withdrawn from one, and the greater part from another, to strengthen the North Atlantic or home station. The European station and the South Atlantic station, which were thus temporarily deprived of their cruising force, have been again occupied, though not with precisely the same force. To the former, from which the Wabash, Congress, Alaska, Wachusett, and Shenandoah were withdrawn in December last, the Franklin, Congress, and Alaska have returned, with the addition of the Juniata; and to the South Atlantic station, from which the Lancaster and

Ticonderoga at the same time were transferred, the Lancaster has returned.

**THE EUROPEAN STATION.**—Rear-Admiral A. Ludlow Case, who left Ville Franche on the 31st of December for Key West, and was temporarily in command of the force on the North Atlantic station, comprising all the vessels concentrated at Key West from January 3 to April 10, returned to Gibraltar May 12, and re-organized the force on the European station, which he still commands. Early in February next, in consequence of his retirement from active service, he will be succeeded by Rear-Admiral John L. Worden, and will return home in the Powhatan, which has been detailed to take out the latter to Lisbon.

Since the re-establishment of the station the several vessels have been cruising in the Mediterranean, and have visited almost all the principal ports and islands frequented by commerce, and where our citizens have interests, from Gibraltar to the coast of Syria. The Congress, on the passage from Key West to the Mediterranean, touched at the Madeiras, Cape de Verd, and Canary Islands, Monrovia, Palmas, and Sierra Leone, some of which places were also visited by other vessels of this command on their way to the station.

**SOUTH ATLANTIC STATION.**—The force on the South Atlantic station is now under the command of Rear-Admiral William E. Le Roy, who succeeded Rear-Admiral James H. Strong at Rio de Janeiro, August 1. The vessels now there are the Lancaster, flag-ship, Monongahela, and Wasp. The Lancaster was attached to the North Atlantic station from January 25 to May 11, returned to Rio de Janeiro July 11, and on the following day the flag of Rear-Admiral Strong was hoisted on board. The Monongahela arrived out December 22, 1873. She sailed from Rio de Janeiro October 1 for the Kerguelan Land to take on board the observers of the transit of Venus, who were stationed at that point, and bring them back to Brazil. The Wasp has been employed in La Plata. The Brooklyn is preparing at Norfolk to proceed to this station as flag-ship, taking the place of the Lancaster, which is to be ordered home.

**THE SOUTH PACIFIC STATION.**—The force on this station, under the command of Rear-Admiral Napoleon Collins, who hoisted his flag on board the Richmond at Panama August 11, consists of that vessel, the Omaha, and the Onward. Rear-Admiral John J. Almy, who was in command at the date of the last annual report, has been assigned to the command of the North Pacific station in place of Rear-Admiral A. M. Pennock, transferred to the Asiatic station. On his departure from Panama, May 18, for San Francisco, in the Saranac, he left Capt. W. K. Mayo, senior officer present, in charge, who was succeeded by Rear-Admiral Collins August 11. Rear-Admiral Almy arrived at San Francisco June 21, and on the 17th of September shifted his flag to the Pensacola. One or another of the vessels of this station has been almost constantly at Panama, where we have the greatest interests at stake.

**THE NORTH PACIFIC STATION.**—Rear-Admiral A. M. Pennock com-



manded the force on this station until the 1st of May, at which time he was transferred to the Asiatic station, taking passage in the mail-steamer of that date from San Francisco. The vessels constituting the force on this station, under the command of Rear-Admiral Almy, as above stated, are the Pensacola, flag-ship, Saranac, Benicia, Portsmouth, Tuscarora, and Narragansett. The Tuscarora has been engaged in deep-sea soundings for a submarine cable between the coast of the United States and Japan and China. She sailed from San Francisco October 30, to run a line to Honolulu, after which she is to visit the Samoan group to inquire into matters affecting the interests of citizens of the United States. The Narragansett has been employed in examining the route of steamers along the Californian and Mexican coasts. The Saranac is now in the vicinity of La Paz, inquiring into alleged wrongs inflicted on American mining companies there.

In February last the Tuscarora, Commander Belknap, then at the port of Honolulu, in conjunction with the Portsmouth, Commander Skerrett, at the earnest solicitation of the government, was instrumental in aiding in the restoration of order in that city. On the 12th of that month, on the occasion of the election of a king, riotous proceedings occurred, and at the pressing request of the authorities, detachments were landed from those vessels the following day. Their commanding officers were prompt on the occasion to comply with the wishes of the government to aid in restoring order, and be in readiness to protect the interests of our own citizens should they be jeopardized. In scarcely more than fifteen minutes after signal on the 13th of February, companies comprising one hundred and fifty officers, blue-jackets, and marines, including a Gatling gun from the Portsmouth, were landed and marched to the scene of action. It was only necessary for the battalion to approach for the rioters to disperse. The court-house was occupied and sentries posted at other public buildings. No further disturbances followed, and the new king was inaugurated. On the 16th a part of the force was withdrawn, and on the 20th the remainder, the government signifying that their presence was no longer needed. The conduct of the officers and men of the battalion was highly commended, and resolutions of thanks to them were passed by the government, the legislative assembly, and the chamber of commerce.

The Benicia has been stationed at the Sandwich Islands since February last. The king availed himself of a passage in this vessel, which was put at his service for that purpose, to parts of his dominions, and afterward sailed in the same ship for San Francisco, where he arrived on the 29th of November.

THE ASIATIC STATION.—Rear-Admiral A. M. Pennock commands the force on this station, comprising the Hartford, flag-ship, Lackawanna, Monocacy, Ashuelot, Kearsarge, Yantic, Saco, and Palos. Rear-Admiral E. G. Parrott, who relieved Rear-Admiral T. A. Jenkins, December 12, 1873, having broken down in health, was condemned by med-

ical survey, and turned over the station to Capt. E. R. Colboun, January 12, 1874, who continued in command until the arrival of Rear-Admiral A. M. Pennock, May 29. The Tennessee is preparing for service as flag-ship, to take the place of the Hartford, and will leave New York in the spring for the station, via the Suez Canal.

**THE NORTH ATLANTIC STATION.**—At the date of the last report the whole available force of the Navy which could be put afloat on the Atlantic Ocean was under orders to re-enforce this station. In addition to the regular force as stated in the last report, every available wooden and iron-clad ship in ordinary was dispatched as rapidly as it could be put in order and properly manned and organized. The Lancaster and the Ticonderoga were recalled from the South Atlantic, and the whole European fleet from the Mediterranean, and ordered to concentrate at Key West. The force thus concentrated on the station consisted of the Franklin, Minnesota, Wabash, Colorado, Lancaster, Brooklyn, Congress, Worcester, Alaska, Ticonderoga, Canandaigua, Shenandoah, Juniata, Ossipee, Wachusett, Powhatan, Wyoming, Kansas, Shawmut, Saugus, Mahopac, Manhattan, Ajax, Canonicus, Dictator, Despatch, Pinta, Fortune, and Mayflower, and Rear-Admiral Case, as senior officer present, assumed command, in pursuance of orders to that effect, January 3, 1874, the date of his arrival at Key West, Rear-Admiral Scott remained in command of a division.

The causes which led to this concentration of force were generally and briefly alluded to in my last report, and it may now be proper, in order to complete the record of the action of the Navy in connection with the *Virginus* affair, to recite the more prominent of the proceedings in relation thereto in which it took part.

Commander Cushing, of the Wyoming, upon receiving information, through dispatches from the consul-general of the United States at Havana, of the capture of the *Virginus* and the execution of a part of her crew, very properly sailed immediately from Aspinwall, where he was then stationed, to Santiago de Cuba, arriving there on the 16th of November. He put himself at once in communication with the authorities of the port, and protested against the further execution of prisoners of the *Virginus*. In the mean time the Kansas, Commander Reed, and the Juniata, Commander Braine, then at New York, had been instructed to proceed to Santiago de Cuba for the purpose of inquiring into all the circumstances connected with the capture of the *Virginus* and the execution of members of her crew. The former sailed from New York November 14, and the latter November 19. The Juniata reached Santiago de Cuba November 26, and the Kansas, meeting with severe weather, did not arrive until December 2. Commander Braine, the senior officer present, entered a protest against the further execution of prisoners of the *Virginus*, and took every means in his power to encourage them and conduce to their comfort. The Department's instructions were judiciously complied with. In carrying out the provisions of the protocol of

December 8, the *Juniata* was instructed to receive on board the survivors of the *Virginias*, provide them with comfortable accommodations, and convey them to the United States. These survivors, one hundred and two in number, were so received December 18, and safely landed at New York on the 28th of the same month. As another provision of the protocol contemplated the saluting of the American flag at Santiago de Cuba on the 25th day of December, 1873, and the *Canandaigua*, Captain Lowry, was dispatched to that port to be present when the salute should be given, and to return it. She left the capes of the Delaware December 12, and reached her destination December 19. This ceremony having by subsequent arrangement been waived, she remained at Santiago de Cuba until January.

In fulfillment of a third condition of the protocol, viz, the delivery of the *Virginus* at Bahia Honda to a war-vessel of the United States, on the 16th of December the *Despatch* was sent to that place for the purpose of receiving her. Captain Whiting, chief of staff of the North Atlantic fleet, was intrusted with this duty. The *Virginus* was received at the point and on the day mentioned, provided with a suitable crew and convoyed to the Tortugas. Here she was placed under convoy of the *Ossipee*, and dispatched to the north. Unfortunately, but unavoidably, in view of her condition and of the fact that she encountered heavy weather, the united efforts of her convoy and of the officers and crew which had been put on board of her were unavailing to save her from the dangers incident to a winter passage on our coast, and she foundered off Cape Hatteras, on her passage to New York. The several officers to whom were intrusted duties of this delicate nature, touching the settlement of an important international question, were instructed to clothe, in carrying out their orders, the firmness required with the utmost courtesy in their intercourse with the officers, both ashore and afloat, with whom they might be brought in contact, and these conditions were studiously observed in every particular.

On June 13, 1874, Rear-Admiral Scott, in consequence of his retirement and in pursuance of orders, hauled down his flag at Key West, leaving Capt. R. T. Renshaw temporarily in command until the arrival of Rear-Admiral J. R. M. Mullany, who had been appointed to succeed him. The latter hoisted his flag on the *Worcester*, at Key West, June 19, and is now in command of the station. The force at present consists of the *Colorado*, *Worcester*, *Ossipee*, *Brooklyn*, *Kansas*, *Shawmut*, *Dictator*, *Canonicus*, *Wachusett*, and *Pinta*, together with the monitors *Ajax*, *Saugus*, *Manhattan*, and *Mahopac*, which are at Pensacola, in readiness for immediate service. The *Plymouth*, now at New York, is under orders to this station, and the *Brooklyn* will be withdrawn and ordered to join the South Atlantic station.

There has always been more or less apprehension of the appearance of the yellow fever on board the vessels of this station during the summer and fall. A single case occurred on board the *Ticonderoga*, lying

at Key West, which proved fatal, and no other cases having developed, it was supposed all danger had passed, and the vessel was removed from quarantine. Nevertheless, instructions were given for the adoption of the strictest sanitary measures to prevent a recurrence of the disease, and such orders issued by the commanding officer as promised the desired result and a securement of health in the squadron. To these measures, it is believed, the good health of the officers and men of the station was greatly due. Only three other cases appeared on the Ticonderoga, which vessel was immediately sent to Portsmouth, agreeably to the Department's instructions, that on the appearance of yellow fever on any of the vessels they should be ordered north.

As a measure of economy and health, five of the monitors were removed from Key West to Pensacola, and all their officers and men taken out, except such as were actually required to keep them in good condition, so that, if necessary, they could be made ready for service without delay or embarrassment.

#### THE YELLOW FEVER AT PENSACOLA

The navy-yard at this station had not been visited by yellow fever for a number of years, and was considered, in point of health, preferable to Key West. The season just past has not justified this assumption, although the monitors stationed there were comparatively free from the epidemic which carried off so many valuable officers and seamen. On its appearance on board the monitors, the senior officer of the station was authorized to remove them to any healthy locality, and to take any steps calculated to prevent a spread of the disease, and one of them, the *Canonicus*, received on board a number of officers and men, and proceeded with them to quarantine at New Orleans. It would, as a matter of course, be much healthier for the officers and crews of ships assigned to these tropical stations, could such ships be ordered north during the summer; but if we are to maintain fleets on the waters of the West Indies and the Spanish Main, they cannot, except in cases of imperative necessity, properly be scattered in search of health and comfort when pressing occasion for their presence may at any moment arise. Those to whom the exposure comes, in the regular course of public duty, must be retained (under stringent sanitary precautions, of course) in these waters, within easy communication with the Department, and prepared for any emergency which may arise.

#### THE NAVAL DRILL.

The affair of the *Virginius* having occasioned the concentration of a naval force of our armored and unarmored ships of war in the waters near the Cuban coast, much more considerable than had been assembled at any time since the civil war, and the disturbed relations that brought these ships together having been happily composed, the opportunity was seized to instruct the fleet in those naval maneuvers so assiduously

practiced every year by the great naval powers, and so highly valued by all naval men as a preparation for war. The officer in command, Rear-Admiral A. L. Case, was, therefore, instructed to take his unarmored ships to sea, and to perform, for a month, in the waters of Florida north of the Tortugas, the maneuvers of a fleet, following the tactical system of the new signal-book just then compiled under the direction of the Bureau of Navigation. In the whole world there can be found no better sea for such maneuvers than this Bay of Florida, with its sheltered waters, its easy anchorage, and its mild and agreeable winter climate.

The general instructions of the Department were elaborated and carried out in detail with much skill by Rear-Admiral Case and his officers, and maneuvers by a large force were executed during a full month, day after day, with great profit to the whole Navy, instructing a very large number of officers and men in the practice of duties hitherto known to most of them only in theory. The fleet returned to Key West early in March, and the monitors were then instructed in the same maneuvers as a separate force. Rear-Admiral Case and the commanding officers under him then devoted themselves for several weeks to the patient scientific instruction of the officers and men of the vessels in practical gunnery and in the use of torpedoes, that new and powerful element of naval war, still imperfectly known, and needing much careful experiment by the ships that are to use them in battle.

The instructions to Rear-Admiral Case also called for careful exercise in landing large bodies of men and guns from the fleet, to be maneuvered on shore. These were skillfully carried into effect; a brigade of 1,900 men was landed and maneuvered at Key West on the 30th of January, under the command of Commodore F. A. Parker, the chief of staff; and on the 23d day of March a still larger force, of 2,700 seamen and marines, with Gatling and field guns, was thrown on shore, under the command of Capt. E. Simpson, of the Franklin, in 84 boats, the landing being made under cover of the guns of four of the ships of the fleet, placed within easy range of the shore. The force was landed in excellent order, and, preceded by a battalion of skirmishers, the brigade advanced to the railway, where it took position.

After maneuvering for some hours, the brigade was re-embarked, having given signal proof of its efficient training, and that our seamen, under the skillful instruction of the graduates of the Naval Academy, themselves carefully trained during four years in the infantry battalion and field-batteries at Annapolis, may always be relied on as efficient troops, should it be necessary to disembark them for land-service.

At the beginning of April, the tactical exercises and practice with guns and torpedoes having been finished, the force was dispersed, the usual squadron remaining in the Gulf of Mexico, while the other ships returned to the North, or to their several stations in Europe or South



America, to resume their usual duties in supporting the interests of our country, and in protecting its commerce.

The important trust committed to Rear-Admiral Case was fulfilled with his accustomed zeal and ability, and in a manner highly satisfactory to the Navy Department.

The Department has also much reason to be satisfied with the proofs given of the success of our Naval Academy and torpedo-school, in imparting to our officers the varied training now become essential to accomplished seamen.

#### PUBLIC MARINE SCHOOLS.

An act of June 20, 1874, to encourage the establishment of public marine-schools, authorized and directed the Secretary of the Navy to furnish, on certain conditions, upon the application of the governor of the State, a suitable vessel, with all her apparel, charts, books, and instruments of navigation, provided the same could be spared without detriment to the naval service, to be used for the benefit of any nautical school, or college having a nautical branch, established at each or any of the ports of New York, Boston, Philadelphia, Baltimore, Norfolk, and San Francisco; and further authorized the detail of proper officers of the Navy as superintendents of or instructors in such schools.

Application having been made by the governor of the State of New York and by the governor of the State of California to have furnished for those States respectively a vessel for the purposes indicated in the act of Congress referred to, the sailing sloop-of-war *St. Mary's* has been designated for the State of New York and the sloop-of-war *Jamestown* for the State of California. These vessels are the best of their class in the Navy, and well adapted for training-ships. They will be turned over to the State authorities, with all their spars, sails, boats, rigging, chains, anchors, battery, and articles of general equipment, with the exception of sea-stores and ammunition. A commanding officer or superintendent has been detailed for each; also an executive officer, as an assistant, for the *St. Mary's*. The naval service will be subjected to a considerable expense in preparing these vessels for this service, for which provision should be made by Congress.

#### VIENNA EXPOSITION.

The store-ship *Guard* returned to New York from the Vienna Exposition April 14 last. She brought home a large collection of articles which had been on exhibition and were not disposed of, belonging to American exhibitors.

In accordance with the expressed desire of the President to do all in his power to relieve the wants and aid in the return to the United States of indigent mechanics employed in the American department in the Vienna Exhibition, instructions were issued to the *Guard* to afford a passage to such of that class as she could accommodate, and who were

willing to mess with the crew. The Guard was also instructed, if she had room, to bring over any articles which might be intended for our Centennial Exhibition in 1876.

#### ICELANDERS, ALASKA.

For the last half year a desire to explore our extreme northwestern coast, with a view to settling, has been expressed by certain Icelanders who have begun an emigration to this continent, and who wish to establish themselves in some region where the climate shall, in summer at least, approximate that of their native island. With the aim of assisting a movement of which the possible effect might be to secure for the coast of the Northern Pacific so excellent a population, which at the same time would furnish hardy fishermen and superior seamen, and in compliance with a suggestion of the State Department, I dispatched the *Portsmouth*, carrying a committee selected by these Icelanders from their own number, to make a short reconnaissance of several points on the Alaskan coast. She sailed from San Francisco in the middle of September, and has just returned with some of the committee to that port. The latter expect to report immediately and at length to their countrymen, both in Iceland and in Canada, as well as in this country. From all the accounts which have been received I am of opinion that the report will be favorable, and that they will recommend an immediate emigration of some of their countrymen to our western coast, with a view to an extensive settlement in the near future. It may easily be that Alaska, however damp and cold, as compared with the greater portion of the United States, will gain by a comparison with the bleak *jökuls* and barren lava-beds of Iceland, and that the dryness of air and height of temperature, which to the American appear necessary, may, to a native of that island, seem almost noxious. In case, however, the Icelandic committee should find Alaska not well adapted for colonization by their countrymen, they cannot fail to find a suitable region upon the coast of Washington or of Oregon, or even of Northern California, where the climate is most favorable to agriculture, and affords as cool a summer and a winter by many degrees not so cold as those of Iceland. In either event, in the interest of our Navy and of commerce, I earnestly recommend, if the Icelandic committee shall find at any point on our Pacific coast a satisfactory location, that whatever assistance the Government is competent to extend toward establishing an Icelandic colony there, be promptly afforded.

I learn that efforts are making to attract this incipient emigration elsewhere, and it is understood that the clannishness of these hardy people will direct future emigration almost exclusively to the first well-established colony. It is not proper for me, in a report of this character, to urge the many material and political advantages which must follow from the settlement of this part of our public domain by a people of this character, but such a result could not but be of value both to our

national and commercial marine. The large choice of occupation offered within our territory, and the comparative hardships of a sea-faring life, combine to prevent our naval and merchant marine from obtaining a fair and desirable share of the most energetic and well educated elements of our population. As the Pacific coast shall become more thickly settled the valuable fishing-grounds which skirt portions of it will make extensive fisheries there; and from this quarter may in time be expected a replenishment of the stock of native sailors. Out of the various racial components of our population, those in which either inherited proclivities or the force of circumstances have developed a taste for sea-life, will, naturally, more than others, be attracted thither, and as the first great impetus which American commerce will receive is probably to take effect on the Pacific, and in the direction of the vast and newly awakened empires of the East, a large demand for American sailors will be created upon that coast.

I shall not discuss here the broader questions connected with this subject, but at least the existence on our western coast of a settlement more or less extensive of these hardy, industrious, and orderly Icelanders, devoted to the sea and its various pursuits, trained to its dangers, and experienced in its trials, would be a valuable and fruitful source of supply to the naval service of trained American seamen in time of need.

#### INTEROCEANIC SHIP-CANAL.

In my last report I referred to the completion of the work intrusted to the expeditions organized under the authority of Congress for the survey of the several routes for an interoceanic ship-canal, thus ending the labors of my Department in this field, which had been strictly of examination and survey.

The distinguished commission which you appointed for the examination and consideration of this subject, however, expressed to me, early in the present year, their wish that an opportunity be afforded for an examination, by competent engineering officers, of the particular lines of survey at Nicaragua and Napipi, in order that their principal engineering difficulties might be considered, the feasibility of the work reported upon, and a general comparison of the two surveys made by officers passing over and considering both lines together.

The Department entered heartily into the ideas of the commission. A vessel of war was detailed to convey the engineer officers selected to and from the location of the surveys to be examined, and to afford to them the necessary facilities for their work.

The officers of the Navy, lately in charge of these surveys, were directed to accompany the representatives of the commission over their respective routes, and to render to them every aid in an inspection of the difficulties for the execution of the work proposed. Invitations were tendered six prominent American civil engineers, of established reputation in this class of work, to accompany the parties of observation,



and two gentlemen accepted, and were afforded every opportunity for examining these lines of survey. The steamer detailed for the convenience of this party returned to the United States after an absence of three months, and it is believed every facility was afforded to a thorough examination of the canal-routes known as Nicaragua and Napipi, as had been requested by the commission. Their report is being prepared, and will, it is hoped, be ready to be printed in the appendix.

#### THE TRANSIT OF VENUS.

It has been a part of the duty of this Department, under provisions of laws passed by Congress at its last three sessions, to organize expeditions for observing the transit of Venus, which occurs on December 8 of the present year. A plan of observation was very carefully matured by the commission created by Congress for that purpose in 1871, and the organization and arrangement of the parties were made to accord with that plan. The entire scientific corps of the expeditions, numbering forty-two persons in all, spent several weeks at the Naval Observatory last spring in preliminary practice with the same instruments they were to use at the stations, thus becoming familiar with the difficult and delicate operations involved in the final observations. The five parties designed for the southern stations were embarked on the ship *Swatara*, Capt. Ralph Chandler, and sailed from New York June 8. So far as yet known the parties were all successfully landed at the selected stations, with the single exception of that on the Crozet Islands. Here there is no anchorage, and the constant stormy weather which prevailed during the period which it was prudent for the ship to delay, prevented a landing. The possibility of this failure had been anticipated by the commission, and the *Swatara* had been directed to land the party at or near Melbourne, in the event of failure to land at the station first selected.

The three northern parties were sent by the regular course of commercial conveyance to Nagasaki, which had been selected as one of the stations. The parties designed for Wladiwostok and Peking were taken thither from Nagasaki by naval ships.

It not being prudent to attempt the return of all the southern parties by the *Swatara*, the *Monongahela* was sent out from the Brazilian station to convey the party from Kerguelen Island to Rio de Janeiro, whence they can return by regular lines of travel.

#### HYDROGRAPHIC OFFICE.

Permit me again to bring to your notice, and most earnestly recommend, that the Hydrographic Office, which is so important to the maritime interests of the country, should receive from Congress such support as may place it on a footing with the most important of such institutions abroad, and enable it to furnish to our naval and commercial marine the charts, books, and information required in the navigation of

the waters of the globe. Before the establishment of the United States Hydrographic Office, the navigators of our own marine were almost entirely supplied from the hydrographic labors of England; their charts, books, and nautical information were all imported, and this great commercial nation was dependent on a foreign country for the means of navigating its vessels and tracing their paths on the great deep. It is true that a few enterprising individuals had constructed and issued the most necessary charts, but these were insufficient, and soon proved that no private enterprise could be remunerated for the expense of such issues.

Since the establishment of the United States Hydrographic Office, in 1866, the commerce of this country, so far as our own resources are concerned, has been wholly dependent upon it for its hydrographic information, for which there is a constant demand. It gratifies me to be able to state that the office has been equal to the emergency, that its progress has been rapid and most satisfactory, and that it has merited the confidence of our boards of trade, and of our commercial and naval marine. Much has been done, but much more is necessary to be done. In its educated and accomplished officers the Navy of the United States possesses the *personnel* for the performance of this and all other duties which can be required of the profession, but to carry the work to a successful termination the means must be supplied. It is evident that hydrographic work on shore and afloat is practically as useful and important as any upon which the Navy can be employed in time of peace, but there is great need that the importance of this work should be more fully appreciated.

At the date of my last annual report two vessels of the Navy, the Portsmouth and the Narragansett, were engaged on surveys in the Pacific Ocean. The work performed by them has been most satisfactory. The latter was engaged in the survey of the coasts and Gulf of Lower California, the charts of which are now in course of publication. The Narragansett is now on her return to that coast to make a few important additions to the survey. Owing to the want of a sufficient appropriation, it was found necessary to withdraw the Portsmouth from the survey.

In the surveys of the great channels of commerce, this country, with the exception of a few isolated expeditions, has done but little, and we have been indebted for our hydrographic information almost entirely to the labors of England and France. The North Pacific Ocean is in a measure considered an American ocean, and the accurate establishment of the innumerable and comparatively unknown dangers becomes a pressing duty of the nation claiming the preponderance in these waters. The annual list of vessels lost (by statistics, numbering 1,465 in 1872) always contains a large number whose fate is unknown, and there is great probability that many have been wrecked on dangers not at all shown or imperfectly located on charts. This applies especially to the

Pacific. Serious errors are also known to exist in all charts of the coasts of the republics bordering the Gulf of Mexico and the Caribbean Sea.

A running survey of the gulf coast of Mexico has been made by the United States steamer *Fortune*, Lieutenant-Commander Green, under the supervision of the Bureau of Navigation, which has very materially changed the delineation of the coast as heretofore laid down, and has disclosed new and important shoals. This work should be extended at least to the boundary of Brazil. At the present day our knowledge of the hydrography of many of the islands of the West Indies is very imperfect, and the correct positions of many of them by no means established with accuracy. An expedition for the determination of longitudes in the West Indies, by means of the electric cable, as stated in my report of the last year, was organized by the Hydrographic Office under the Bureau of Navigation. Owing to adverse occurrences, this expedition was necessarily detained, but has recently left the United States under the command of Lieutenant-Commander Green, for the prosecution of this work.

During the present year the United States steamer *Tuscarora*, Commander George E. Belknap, has been employed in taking deep-sea soundings in the North Pacific Ocean, for the purpose of ascertaining a practicable route for a submarine cable between the United States and Japan. The northern and southern routes between these countries have been examined by running lines of soundings. The line on the former route commenced at Cape Flattery, touched the Aleutian Islands, skirted the coasts of the Kurile Islands, and terminated at Yokohama, Japan. On the latter route the line commenced at San Diego, California, touched the Hawaiian and the Bonin Islands, and terminated also at Yokohama. Besides these lines of soundings others were run on and off shore between Cape Flattery and San Diego, for the purpose of determining the continental outline or the commencement of the ocean-bed proper. The reports of Commander Belknap have been received by the Bureau of Navigation, and collated at the Hydrographic Office, and are now in course of publication.

For the prosecution of the survey in the Pacific Ocean I recommend that the appropriation be allowed in accordance with the estimates submitted by the Bureau of Navigation, and also that an appropriation be made for the construction or purchase of two three-masted schooners of 300 tons burden, with their equipment, including two steam-cutters, for the more economical and expeditious advancement of the survey.

I must again ask your consideration of the necessity of a suitable building, which should be the property of the Government, for an Hydrographic Office; and, referring to my former reports, repeat that I do not consider the rented building at present occupied by this Office either suitable or safe without a considerable fire-proof addition. I, therefore, recommend that an appropriation be made for the purchase and fitting, or for the construction, of a safe and secure building for this purpose.

For the various hydrographic work accomplished by this Office during the last fiscal year, I refer you to the report of the hydrographer to the chief of the Bureau of Navigation.

#### NAVY-YARDS.

The subject of the condition and necessity of our navy-yards and naval hospitals was carefully investigated during the last summer, by the Senate Naval Committee, under a special resolution for that purpose, and their report, to be made to the Senate, will, without doubt, contain much information and many valuable and authoritative suggestions. In the mean time I beg to renew the recommendations made in my previous annual reports in reference to the navy-yards, and, through you, to press upon Congress the propriety of increasing and developing their practical resources.

In view of the great strides made by other naval powers, I am impelled thus to urge the imperative need of bringing our naval workshops up to the highest state of efficiency.

*Mare Island.*—At this navy-yard, whose site, for all the requirements of a great naval station, is unsurpassed, the work of building a dry-dock capable of taking in the largest vessel in our Navy is progressing satisfactorily. The iron-working shop for construction is nearly completed. Our great naval interests in the Pacific are growing year by year, and I strongly urge the necessity of liberal appropriations for the purpose of developing this important naval arsenal.

*Pensacola.*—In consequence of the unusually fatal epidemic which prevailed at this navy-yard during the past summer, the rebuilding of the workshops has been somewhat retarded. The plans for commencing the construction of a dry-dock are in a state of forwardness. An additional appropriation will be required to complete this important object. There is an absolute necessity that a wooden hospital should be built outside the navy-yard, and the site of the old hospital destroyed during the war is recommended. The present hospital is situated within the navy-yard, and in the immediate vicinity of the quarters and the workshops; and occupied as it was, during the epidemic, with yellow-fever patients, it assisted in scattering the seeds of disease throughout the yard. It should be torn down and a new hospital erected as suggested.

An appropriation is also needed for the erection of suitable barracks for the marines of the station. It would be difficult to overstate the importance of this navy-yard as a rendezvous and repairing-yard for our vessels of war in the event of complications in or near the Gulf of Mexico, the West Indies, or the Spanish main.

*League Island.*—At League Island the special appropriation voted by Congress for the purpose has been judiciously expended in removing to it material from the Philadelphia navy-yard. The machine-shop and store-house for yards and docks is completed, and a part of the machinery is in operation. The great iron-working establishment is roofed, and

can be finished in a short time, and the massive building for steam-engineering is well under way. The successful erection of these great buildings has conclusively established the fact that there is no difficulty in finding a secure foundation at moderate cost.

I beg again to suggest that Congress cause the Philadelphia navy yard to be valued, and that the ascertained value in money be advanced to the Navy Department, with instructions to expend the amount thus appropriated within four years upon such improvements at League Island as shall warrant the abandonment of the old yard. The Treasury may then, by its sale, be re-imbursed for the sum advanced.

*New London.*—At New London a building for equipment purposes, erected under the appropriation made at the last session, is nearly finished, and the main wharf at the station is being extended.

Little has been accomplished at any other of the navy-yards on the Atlantic seaboard beyond the necessary repairs to yard-buildings, wharves, and dry-docks.

At *Kittery* nothing has been done further than was absolutely necessary to maintain the yard in its present admirable condition.

At *Boston* the dry dock has been thoroughly repaired, the wet basin cleaned out, and proper cribs built for retaining the timber. Various repairs have been made to the rope-walk and the other wharves, and the yard-buildings placed in as good condition as the appropriation would permit.

At *Norfolk*, a station most favorably situated and most valuable in its adaptation for naval work at all seasons of the year, we have not been able to enter upon any large new work, but are progressing slowly with the gradual improvement of its large advantages, and its restoration to something like the condition it had before the late war.

*New York.*—Past experience has demonstrated that the value of this navy-yard in time of emergency cannot be overestimated. From its proximity to the great maritime city of the nation, skilled labor and all the vast resources of the country are brought to its gates, and the accumulation of naval stores, wharves, docks, and workshops of the cities of Brooklyn and New York are its immediate adjuncts. I trust that no legislation may ever interpose to change its unrivaled site or to diminish its present area. Partial repairs have been made to the cob-dock, but for want of funds much has been left undone, to the great detriment of this important work.

#### ORDNANCE.

This Bureau has continued its experiments in the manufacture of gunpowder, and has sufficiently settled the points of detail to make it desirable to increase our stock of this prime necessity of war, which had been allowed to fall quite low pending this investigation. An appropriation is recommended.

The question of the substitution of rifled for smooth-bore cannon as



the entire armament of our ships has also become of paramount importance since their universal adoption by other maritime powers.

While the whole subject was still immature, undergoing investigation by other nations more vitally interested in the speedy solution of the problems of breech or muzzle-loading, relations of caliber of gun to form and weight of projectiles and their charges, and methods of rifling, we wisely held aloof. But it has now passed the experimental stage, and all artillerists are convinced that the time to discard the smooth-bore has come, reserving the details of the gun for further discussion.

Although this Department does not propose entering into the construction of monster cannon, yet the manufacture of the heavy ordnance required in the present day is an art requiring an extensive plant and trained skilled workmen.

The Bureau of Ordnance is prepared with a system of armaments for our ships not inferior to that of any other power, whenever Congress shall authorize the necessary expenditure.

#### TORPEDOES.

Our circumstances do not require that we should take part in the rivalry between monster cannon and impenetrable armor, since few of our ports are accessible to ships carrying either; and these may be better defended by attacking the vessel below her armor by subaqueous cannon, movable and stationary torpedoes.

The latter, which more peculiarly appertains to the land-service, being necessarily under cover of the guns of fortifications, recent experiments show cannot be relied upon to close the entrance of any of our important harbors. They must be supplemented by torpedo-boats operating by actual contact and by movable torpedoes, which can be directed from the shelter of the monitor turrets.

Two torpedo-boats, the *Intrepid* and *Alarm*, have been completed, but not in season for the extended trials necessary fully to develop all their capabilities.

The general professional opinion of the Navy is that the offensive torpedo can also be most effectually operated from swift, inexpensive, unarmored vessels, some of which will escape the hostile guns, owing their safety to small size and rapid maneuvering.

The consideration of Congress is earnestly directed to this most important and economical means of naval warfare, which is at this time occupying the attention and commanding the interest of the scientific and civilized world.

#### THE MARINE CORPS.

The Commandant of the Marine Corps reports the discipline of that service as creditable alike to officers and men. During the year, in conformity with legislation, the strength of the Corps has been reduced five hundred men, but the Commandant is of the opinion that, in view of the number of ships, navy-yards, and magazines requiring guards, the

present limited number is not sufficient for all the duties required of the corps. In regard to this gallant Corps, I am glad to say that its usefulness as a part of the naval service has been well established by the active and honorable part it has always borne in the achievements of our Navy, and by the concurrent testimony of our most experienced and distinguished commanders.

NAVAL-PENSION FUND.

*Statement of the number and yearly amount of pensions of the Navy on the rolls November 1, 1874, and the amount which was paid during the last fiscal year.*

Class.	On the rolls November 1, 1874.	Yearly amount of pensions on the rolls November 1, 1874.	Amount paid for pensions during the fiscal year ending June 30, 1874.
Navy invalids.....	1, 601	\$171, 350	\$174, 185 00
Navy widows and others .....	1, 814	290, 558	367, 511 04
Total.....	3, 415	461, 908	541, 696 04

ESTIMATES AND EXPENDITURES.

The appropriations applicable to the fiscal year ending June 30, 1874 including the unexpended balance of the appropriations for the building of new sloops, and the special appropriations to re-imburse the Bureaus for their extraordinary expenditures during the threatened complications with Spain, amounted in the aggregate to \$27,147,857.68, and the actual expenditures for the same period, to wit, from July 1, 1873, to June 30, 1874, from these appropriations, amounted to \$26,254,155.82, or about \$900,000 less than the whole amount. The appropriations made available for the current year, commencing July 1, 1874, amount in the aggregate to \$19,273,731.27. The amount of these appropriations for the current year, drawn for the five months since July 1, and up to the 1st of December, 1874, is \$11,854,446.87, which, reduced by the amount refunded during the period, and that remaining in the hands of the paymasters and agents of the Government, will leave a little less than \$9,000,000 as the sum actually expended from the current appropriations during the five working summer months of this year. A detailed account of the monthly expenditure of the Navy appropriations for the fiscal year 1873-'74, and for the present year to December 1, will be found in the appendix.

ESTIMATES.

Pay of officers and seamen of the Navy.....	\$6, 600, 000 00
Pay of civil establishment in navy-yards.....	215, 000 00
Ordnance and torpedo corps .....	624, 431 00

Coal, hemp, and equipments.....	\$1,500,000 00
Navigation, navigation supplies.....	117,500 00
Hydrographic work .....	111,300 00
Naval observatory, nautical almanac, &c.....	52,000 00
Repairs and preservation of vessels, &c .....	3,505,000 00
Steam-machinery, tools, &c.....	2,000,000 00
Provisions .....	1,500,000 00
Clothing.....	200,000 00
Repairs of hospitals and laboratories.....	25,000 00
Surgeons' necessities .....	40,000 00
Contingent expenses of various departments and bureaus.....	451,600 00
Naval Academy.....	142,817 40
Support of Marine Corps.....	1,098,196 25
Naval Asylum, Philadelphia, &c .....	53,723 00
Maintenance of yards and docks .....	860,000 00
	<hr/>
	19,096,567 65

These are a little more than \$150,000 less than the estimates for the same objects last year, while the current repairs of the buildings, docks, and public works of various kinds at the several naval stations are estimated to require \$1,791,500 in addition, making the whole amount of all the estimates aggregate somewhat larger than those of last year.

In conclusion, I am glad to be able to report the fighting-force of our Navy in good and effective condition. During the last two years the whole fleet of our single-turreted monitors has been thoroughly overhauled and repaired, their sides raised up, their rotten wooden beams and decks replaced by iron, and their turrets and machinery put in complete order, so that they are now efficient to their utmost capacity, and ready to go to sea at any time as soon as crews can be put on board and organized. These, with the Dictator and Roanoke, also in good order, make a fleet of sixteen iron-clads, powerful for any naval purpose which does not require long voyages, or great speed. Two powerful iron torpedo-vessels have also been completed, and are ready for service, fully equipped with this most powerful weapon of modern warfare. Four of our powerful double-turreted monitors, viz, the Terror, the Miantonomah, the Monadnock, and the Amphitrite, (by far the most formidable vessels ever in our Navy,) are also now in hand undergoing repairs, and the plans are also being matured for the repair of the Puritan, the only one of our efficient iron-clads which remains untouched. The eight new sloops specially authorized, and built entirely of live-oak or iron, are about ready to be added to our cruising-navy, and seven other of our vessels have been, or are being, thoroughly repaired with like durable material, and supplied with new and improved machinery, so as to be in all respects equal to new ships of their class. We shall thus have added, by the end of the year, fifteen new and active ships to our cruising-navy, to take the places of those vessels which are worn out and must be relieved. Most of our powerful wooden ships of the first class were also put in condition at the time of our threatened difficulties of



last year, and are now in commission or in ordinary, ready for immediate service when needed. Thus all that there is of our Navy either is or will shortly be in the best state possible for vessels of their respective classes, and all will be, and will continue to be effective for service, except those of our cruisers which, built hastily of green white-oak, are now rapidly reaching the limits of their sea-life, and are one by one falling out of the line of active duty, to be laid up or sold as unfit for further service.

Warned by the rapid decay of our white-oak ships, the Department has required that all new wooden ships should be built, and all our extensive repairs made, of live-oak, and has, for this purpose, and for the future necessities of the service, secured and accumulated a large quantity of this almost invaluable but rapidly-disappearing material in the various navy-yards, where it will be properly cared for and seasoned, for use as occasion may require.

This statement certainly shows our Navy to-day in a better condition of effective and permanent strength than it has been for years; and when we understand that three years ago none of our now efficient iron-clads, except the Dictator and the Terror, were fit for any service whatever, and that during that time we have, in addition to putting them in repair, practically built fifteen live-oak cruising-ships, and carried on also the necessary repairs to maintain the Navy afloat; and that at that time there was scarcely a stick of live-oak timber in the Government yards, where now is gathered an adequate supply of this most valuable and improving material; and when we remember that it has been possible, under the direction of our skilled and practical officers, so to utilize the liberality of Congress, that this has been accomplished out of the comparatively small portion of the naval appropriations which it is possible to devote to the actual building and equipment of ships, we are justified in feeling some pride in the prospect, that the American Navy will be able in the future, as in the past, to contribute its fair proportion to the strength, resources, and dignity of a powerful though peaceful nation.

GEO. M. ROBESON,  
*Secretary of the Navy.*

The PRESIDENT.

## SUPPLEMENT.

### *Exhibit of expenditure chargeable to Navy appropriations.*

	Drawn.	Refunded.	Expended.
<b>Appropriations for 1873-'74.</b>			
<b>1873.</b>			
July.....	\$2,926,025 36	.....	\$2,926,025 36
August.....	1,609,104 00	\$6 37	1,609,097 63
September.....	4,519,844 54	2,000 00	4,517,844 54
October.....	2,901,158 03	1,845,912 93	1,055,245 10
November.....	2,865,395 75	71,046 23	2,794,349 52
December.....	3,562,866 69	3,760 14	3,559,106 55
<b>1874.</b>			
January.....	3,015,468 79	470,236 66	2,545,232 13
February.....	2,344,337 97	445,121 04	1,899,216 93
March.....	1,932,637 38	280,853 47	1,651,783 91
April.....	2,179,261 59	488,736 02	1,690,525 57
May.....	1,203,867 02	270,569 52	1,023,297 50
June.....	1,062,425 64	79,994 56	982,431 08
<b>Total.....</b>	<b>30,212,392 76</b>	<b>3,958,236 94</b>	<b>26,254,155 82</b>
<b>Appropriations for 1874-'75.</b>			
<b>1874.</b>			
July.....	2,636,583 00	.....	2,636,583 00
August.....	2,376,229 03	.....	2,376,229 03
September.....	2,705,056 29	140 00	2,704,916 29
October.....	2,258,742 67	100,796 88	2,157,945 79
November.....	1,877,841 88	154,140 44	1,723,701 44
<b>Total.....</b>	<b>11,854,452 87</b>	<b>255,077 32</b>	<b>11,599,375 55</b>

## MOVEMENTS OF THE VESSELS ON THE STATIONS.

### EUROPEAN STATION.

On the 30th of November, 1873, the European command comprised the following vessels, viz: Wabash, (flag-ship,) 45 guns; Congress, 16 guns; Alaska, 12 guns; Shenandoah, 11 guns; and Wachusett, 6 guns. All of these at that time were under orders to proceed to Key West, Fla., and on that day the Wabash, Congress, Alaska, and Wachusett left Gibraltar, and the Shenandoah Ville Franche on the 5th of December, stopping at the following places *en route*, viz: Wabash, at St. Thomas, W. I.; Congress, at Funchal, Madeira, and St. Thomas; Alaska, at Funchal and St. Thomas; Wachusett, at Funchal and St. Thomas; and Shenandoah at Tangiers, Morocco, Funchal, and St. Thomas.

On their arrival at Key West they became part of the combined fleet of the European, South and North Atlantic stations, under command of Rear-Admiral A. Ludlow Case, and took part in all the exercises and evolutions in the Bay of Florida, Tortugas, Key West, &c., until the fleet was broken up.

The force for the European station was reorganized under the command of Rear Admiral A. Ludlow Case, and consists at present of the

following vessels: Franklin, (flag-ship,) 39 guns; Congress, 16 guns; Alaska, 12 guns; and Juniata, 8 guns.

The movements of the vessels have been as follows:

**FRANKLIN.**—The Franklin sailed from Key West April 11, and has since visited the ports of Funchal, Gibraltar, Cartagena, Spain; Ville Franche, France; Spezzia, Italy; Ville Franche and Marseilles, France; Port Mahon, island of Minorca; Messina, Sicily, Zante, Ionian Islands; the Piræus, Smyrna, Turkey in Asia, Syra and Milo, Grecian Archipelago, Suda Bay, in the island of Candia, Turkish Dominions, Messina, and Naples. Will leave Naples November 20 for Spezzia, and thence to Ville Franche, into winter quarters.

**CONGRESS.**—The Congress left Key West April 10, and has since visited the ports of Funchal, Teneriffe, Canary Islands, St. Vincent, Cape de Verde Islands, Monrovia, Palmas, and Sierra Leone, West coast of Africa, St. Vincent, Funchal, Gibraltar, Ville Franche, Marseilles, Barcelona, Spain; Port Mahon, Messina, Zante, the Piræus, Smyrna, Syra, Milo, Suda Bay, Messina, Palermo, and Naples. Will sail thence on the 18th of November for repairs to her engines and boilers.

**ALASKA.**—The Alaska left Key West April 9, and has since visited Horta, island of Fayal, Bordeaux, France; Corunna, Spain; Lisbon, Portugal; Gibraltar, Tangiers, Algiers, Algeria, Tunis, Messina, Palermo, Spezzia, Ville Franche, Naples, Messina, Cephalonia and Cerigo, Ionian Islands; the Piræus, Syra, Smyrna, Rhodes and Cyprus, Turkish Archipelago; Beirut and Jaffa, Syria; Port Oaid and Alexandria, Egypt; Malta, and Civita Vecchia. Will sail thence for Spezzia to undergo repairs.

**JUNIATA.**—The Juniata left Key West April 9, and has since visited the following ports, viz: Fayal and St. Miguel, Western Islands; Cadiz, Spain; Gibraltar, Malaga, Almeria, Cartagena, Denia, Alicante, Tarragona and Barcelona, Spain; Ville Franche, Spezzia, Messina, Tarranto, Brindisi, Manfredonia, Ancona and Venice, Polo and Fuime, in Austria; Sipalatro, Ragusa and Durazzo, in Dalmatia, Austrian Dominions; Arlona, in Albanian Turkey in Europe; Corfu, Cephalonia and Zante, Ionian Islands; Messina, Palermo, and Naples. Will leave Naples November 18 for Leghorn, where she will undergo repairs.

#### NORTH ATLANTIC STATION.

The following-named vessels were temporarily attached to the North Atlantic station during the year ending November 1, 1874: Wabash, 45 guns; Franklin, 39 guns; Lancaster, 22 guns; Congress, 16 guns; Alaska, 12 guns; Ticonderoga, 11 guns; Shenandoah, 11 guns; Juniata, 8 guns; Wyoming, 6 guns; Dispatch, 4 guns; Canonicus, 2 guns; Mahopac, 2 guns; Manhattan, 2 guns; Saugus, 2 guns; Iris, 2 guns; Yuma, 2 guns; Fortune, 2 guns; and Mayflower, 2 guns.

The following-named vessels were attached to the North Atlantic station, Rear-Admiral J. R. M. Mullany commanding, during the year ending November 1, 1874: Colorado, 46 guns; Worcester, 15 guns; Brooklyn, 20 guns; Powhatan, 17 guns; Canandaigua, 10 guns; Ossipee, 8 guns; Wachusett, 6 guns; Kansas, 3 guns; Shawmut, 3 guns; Pawnee, 2 guns; Pinta, 2 guns; Dictator, 2 guns; and Canonicus, 2 guns.

The following is a synopsis of the movements of the foregoing vessels during the year ending November 1, 1874, including the movements of those vessels temporarily attached to the North Atlantic station during the time they were so attached:

**WORCESTER.**—The Worcester was at Norfolk November 1, 1873.

Sailed 18th for Key West, and arrived 23d; sailed for Havana January 11, 1874, arriving on 12th, returning to Key West 16th. January 23, sailed on cruise to Cuba and to the Windward Islands. Rear-Admiral Scott having, on the 3d, turned over the chief command of the station to Rear-Admiral Case, visited Havana, Matanzas, Santiago de Cuba, San Domingo City, San Juan de Porto Rico, St. Thomas, Santa Cruz, St. Pierre, Martinique, Bridgetown, Barbados, Port of Spain, Trinidad, Curacao, returning to Havana March 21; thence to Key West on the 1st of April; visited Havana again May 16; left same day for Pensacola, and arrived on 20th at Pensacola; left on the 26th, and on next day anchored off Pass à Loutre, mouth of Mississippi River. Rear-Admiral Scott and staff with other officers visited New Orleans in tug *Pinta*; returned to Key West June 5. Flag of Rear-Admiral Scott hauled down June 13; that of Rear-Admiral Mullany hoisted June 19; ceased to be flag-ship August 27. September 22, left Key West for New Orleans, arriving on 26th. Flag of Rear-Admiral Mullany shifted to Worcester from Canandaigua on 27th; at New Orleans November 1, 1874.

**COLORADO.**—The Colorado was put in commission December 2, 1873, and arrived on the station, at Key West, December 21, 1873; participated in naval drill during February following; returned to Key West from Florida Bay 28th February; visited Havana 10th April; at Matanzas from 15th to 23d; touched again at Havana on the 24th, and reached Key West 25th. June 10, sailed for Norfolk, Va., and went into dock. Returned to Key West from Norfolk August 2; at anchor at Key West since then. Rear-Admiral Mullany hoisted his flag on board August 27, hauling it down on board the Worcester. Flag transferred temporarily to Canandaigua September 21, for passage to New Orleans.

**WABASH.**—Arrived at Key West January 3, 1874, with Rear-Admiral Case on board. Chief command of squadron turned over to him the same day by Rear-Admiral Case; took part, as flag-ship, in the naval drill in Florida Bay during February. Rear-Admiral Case transferred his flag to the Franklin April 1; left for the North, to go out of commission, April 3, touching on way at Havana.

**FRANKLIN.**—The Franklin was put in commission at Boston December 15, 1873, and arrived at Key West January 2, 1874. Took part in naval drill in Florida Bay during the month of February. Visited Havana during March. Rear-Admiral Case hoisted his flag on board April 1, and sailed for European station April 11, 1874.

**LANCASTER.**—Arrived on station from Rio de Janeiro, January 25, 1874. Participated in naval drill in Florida Bay during February. Left Key West under tow of Dictator to test power of latter vessel, April 21st, returning next day. Sailed May 16 for South Atlantic station.

**BROOKLYN.**—The Brooklyn arrived at Key West February 15, 1874. Joined fleet in Florida Bay and participated in naval drill. Left for Pensacola March 12. Touched at Mobile. Returned to Key West April 9. Left for cruise among Windward Islands April 19. Visited islands of St. Thomas, Guadaloupe, Dominica, Martinique, St. Lucia, Barbados, Grenada, and Trinidad, returning to Key West June 10. Left for Pensacola June 30, as convoy to monitors. Returned thence to Key West July 15. On the night of September 21, in attempting to leave the harbor of Key West, under orders to New Orleans, grounded. Got off on the 24th. October 6, sailed for Norfolk, under orders of the Department to go into dry-dock. Arrived there October 18, and is refitting for service as the flag-ship of the South Atlantic station.

**CONGRESS.**—The Congress arrived from Europe January 6, 1874. Participated in naval drill in Florida Bay during February. Visited Havana during latter part of March. Left for European station April 8.

**ALASKA.**—The Alaska arrived from Europe January 5, 1874. Participated in naval drill in Florida Bay during February. Visited Havana during latter part of March. Left for European station April 8.

**POWHATAN.**—The Powhatan, on special service under immediate orders of the Department, convoyed monitor Manhattan to Key West in December, 1873. Returned at once north, and in January, 1874, arrived at Key West with draft of recruits to form crew of the Congress. Convoyed monitor Canonicus to Key West in March. Visited Pensacola, Fla., and Havana, and thence north. Ordered in September to New Orleans, arriving off the city September 30. She remained at New Orleans until November 7, when she proceeded to Norfolk, arriving on the 16th, and will take Rear-Admiral Worden to Lisbon.

**TICONDEROGA.**—The Ticonderoga arrived from the South Atlantic station January 22, 1874. Participated in naval drill during February, officers and crew having been previously changed. Went north, to Norfolk navy-yard, for repairs to rudder, April 4. Returned to Key West June 6. Yellow fever appearing on board August 12, and again on the 27th, she was ordered to Portsmouth, N. H. She was put out of commission at Portsmouth October 24.

**CANANDAIGUA.**—The Canandaigua arrived at Santiago de Cuba from Philadelphia, where she had been under repairs, December 19, 1873. Ordered to remain and receive salute that was to have been fired in honor of the United States flag December 25. That ceremony becoming unnecessary by reason of the terms of the protocol between Spain and the United States having been complied with on the part of Spain, left Santiago de Cuba and reached Key West January 21, 1874. Participated in naval drill in Florida Bay during February. Left Key West to visit ports of the Greater Antilles and Virgin Islands. Had visited Mayaguez, Aguadilla, Porto Rico, and Samana, and was proceeding on cruise when she was ordered to return to Samana to remain and look out for American interests there. July 5, having been relieved by the Wachusett, sailed for Key West, touching at San Domingo City and Santiago de Cuba, arriving July 31. Remained at anchor at Key West till September 21, when Rear-Admiral Mullany hoisted his flag temporarily on board and sailed for New Orleans, arriving off the city September 25. Flag hauled down September 27, and transferred to Worcester.

**SHENANDOAH.**—The Shenandoah arrived from Europe January 22, 1874. Participated in naval drill in Florida Bay during February, left Key West for the north, to go out of commission, April 4, 1874, and was put out of commission April 14.

**JUNIATA.**—The Juniata arrived at Santiago de Cuba early in December, 1873. Received the survivors of the *Virginus* on board December 18, and sailed immediately for New York. Left New York as convoy to the Dictator in February, separated from convoy off Savannah, Ga. Reached Key West February 21, and joined fleet exercising in Florida Bay. Touched at Havana March 28, left Key West April 8 for European station.

**OSSIPEE.**—The Ossipee arrived on station at Key West with the Mahopac December 4, 1873; sailed January 15 for the Tortugas to await arrival of the steamer *Virginus*, having taken coal-schooner in tow. Left 19th, towing the *Virginus*. *Virginus* sinking December 26, proceeded on her way and arrived at New York 30th. Early in Jan-



uary ordered to Washington for officers to testify in the *Virginus* investigation; 20th January, 1874, left Washington and went to Norfolk. Arrived at Wilmington, Del., February 1. Took the *Ajax* in tow and left for Key West, arriving 20th. Joined fleet in exercising in Florida Bay. Sailed from Key West April 11, on cruise, visiting Curaçoa, Porto Cabello, Lagnayra, Cartahgena, Aspinwall, and Greytown, returning to Key West June 20. June 30, sailed for Pensacola as convoy to monitors; returned to Key West July 12. July 31, sailed for Punta Rassa to recover Government property said to have been stolen. Sailed from Key West September 3, for Samana Bay, to relieve the *Wachusett*, November 1, at Samana Bay.

**WACHUSETT.**—The *Wachusett* arrived from the European station December 31, 1873. Left Key West January 11, 1874, for Cedar Keys, arriving on the 14th. January 18th, took Commodore F. A. Parker on board and returned to Key West. Participated in naval drill in Florida Bay during February. Left Key West March 16 for New Orleans, Commodores Rodgers and Parker on board. Returned to Key West April 4. Left Key West on cruise April 19; visited Havana, Balize, Sisal, Campeche, Frontera, Vera Cruz, Tampico, Galveston, returning to Key West June 2d. Sailed June 10 for Samana, as the relief of the *Canandaigua*. Returned from Samana to Key West September 15. September 22 got under way to follow flag-ship to New Orleans. The *Brooklyn* getting aground, remained by her three days to give her assistance. Reached New Orleans September 27. November 1, under orders to return north, to go out of commission.

**WYOMING.**—The *Wyoming* was, November 1, 1873, at Aspinwall. Left upon hearing of the capture of the *Virginus*; touched at Kingston, Jamaica, and reached Santiago de Cuba November 19. Arrived at Key West from Santiago December 10; sailed December 23 for Aspinwall, to convoy the steamer *General Sherman*, which she had previously taken possession of, to an American port; arrived at Key West with convoy January 22, 1874. Participated in naval drill in Florida Bay during February. Left for Washington navy-yard, to go out of commission, and was put out of commission April 30.

**KANSAS.**—The *Kansas* arrived at Santiago de Cuba from the north December 10, 1873; arrived thence at Key West December 25. Participated in naval drill in Florida Bay during February, 1874. Left Key West April 11, to survey on coast of San Domingo, Hayti; surveyed Burne's Shoal, (Bahamas.) Visited Port au Prince, Cayenites, Aux Cayes, and Jacmel, and returned to Key West June 13. June 30, left for Pensacola to convoy monitors there, returning on July 15. August 18, left Key West, and on 21st anchored in Tampa Bay, Florida. Remained there till September 24, when, receiving telegraphic orders, she left for New Orleans, arriving on 28th. At New Orleans November 1, 1874, preparing for cruise in the West Indies and a visit to Aspinwall.

**SHAWMUT.**—The *Shawmut* arrived on station from Washington navy-yard, where she had been repairing, April 11, 1874. Sailed on 21st to make surveys on south coast of Cuba. Visited and examined Baitegueri, Guantanamo, Masio, Casalda, Tunas, surveyed Pickle Bank, and searched for La Vela Shoal. Visited Santiago de Cuba, Cienfuegos, and Nuevitas; returned to Key West May 20. June 30, sailed for Pensacola as convoy to monitors; returned July 12 to Key West. Sailed for New Orleans September 22, and arrived off the city on the 25th. At New Orleans November 1, 1874.

**DISPATCH.**—The *Dispatch* arrived at Key West from Norfolk Decem-

ber 5, 1873. Sailed for Pensacola December 7. Left on the 12th for Key West, with Lieut. Anlick Palmer, United States Marine Corps, special messenger of the Department, on board, as bearer of dispatches to Rear-Admiral Scott. Arrived on 13th. Sailed on 14th for Bahia Honda, with Capt. W. D. Whiting, commanding the Worcester, and chief of staff, on board, to receive the steamer Virginus. Virginus turned over 16th December, when the Dispatch sailed, towing her, for the Tortugas. Returned to Key West the 19th. Participated in naval drill in Florida Bay during February, 1874. Withdrawn from station first part of April, 1874. Arrived at Norfolk April 15, thence for Washington, arriving on the 21st. In August she conveyed the Naval Committee of the Senate to the several navy-yards on the Atlantic coast, in pursuance of a resolution of the Senate.

**PAWNEE.**—Was employed as hospital, receiving, and store ship at Key West. Ceased to be used or considered as hospital-ship by virtue of Department's order of July 18, 1874.

**DICTATOR.**—The Dictator arrived at Key West February 18, 1874, having separated from her convoy, the Juniata, off Savannah, Ga. Twenty-first of April made test of towing-power on the Lancaster, attaining a speed of six knots. Lying at anchor since then at Key West.

**AJAX.**—The Ajax arrived at Key West February 20, 1874, convoyed by the Ossipee. Remained till June 30, when she sailed under convoy for Pensacola, to be laid up.

**CANONICUS.**—The Canonicus arrived at Key West, from Philadelphia, March 17, 1874, in tow of the Powhatan. Remained at Key West until June 30, when she sailed under convoy for Pensacola, Fla., to be laid up. Arrived from Pensacola at quarantine station, Mississippi River, October 5. Came up to city of New Orleans October 28, to be kept in commission.

**MAHOPAC.**—The Mahopac arrived in tow of the Ossipee December 4, 1873, at Key West; lay there until June 30, when she left under convoy for Pensacola, to be laid up.

**MANHATTAN.**—The Manhattan arrived December 21, 1873, in tow of the Powhatan, at Key West; lay at Key West until June 30, 1874, when she left under convoy for Pensacola, Fla., to be laid up.

**SAUGUS.**—The Saugus arrived at Key West November 21, 1873, where she remained at anchor until March 11, when she left harbor for exercise, returning same day; sailed 30th July, 1874, for Pensacola, under convoy, to be laid up.

**IRIS AND YUMA.**—The Iris and Yuma were put in temporary commission at New Orleans September 17, 1874; laid up again October 5.

**FORTUNE.**—The Fortune arrived December 5, 1873, at Key West: sailed the 16th with directions to assist, if necessary, in towing the Virginus. Returned 19th, and left same day for Santiago de Cuba with Department's orders regarding salute to the United States flag. Touched at Matanzas 27th for two convicts escaped from the Tortugas. Left Key West on detached service April 5, 1874, for survey of Mexican coast in the neighborhood of Vera Cruz. Touched at Key West in July on way north. Arrived at Washington and refitted, and proceeded thence, October 29, to Philadelphia, which latter port she left November, for the Gulf, to engage on special duty.

**MAYFLOWER.**—The Mayflower arrived at Key West from Norfolk December 22, 1873. Participated in naval drill in Florida Bay during February, 1874. Left for Washington April 8, 1874, and arrived April 23.

**PINTA.**—The Pinta arrived at Key West December 4, 1873. Left

for Havana December 13, with special messenger of the Department *en route* to Santiago de Cuba on board. Landed him at Havana, and then proceeded to Santiago with duplicate of protocol between Spain and the United States in reference to the Virginius affair, for delivery to the senior naval officer there present. Returned to Key West December 22. Sailed for Havana 24th, returning on the 28th. Employed during naval drill in Florida Bay as dispatch-boat, keeping up communication with Key West. Assisted telegraph company at intervals during April in repairing cable. Arrived at Pensacola May 24, and accompanied the Worcester, as tender, to mouth of the Mississippi River, taking Rear-Admiral Scott and other officers up to New Orleans; returned to Key West June 5. June 30 went to Pensacola as convoy to monitors, and returned July 9. Employed generally throughout the year as tug and dispatch boat.

#### SOUTH ATLANTIC STATION.

The vessels now on this station are the Lancaster, (flag-ship,) 22 guns, Monongahela, 11 guns, and Wasp, 1 gun. The movements of the vessels during the past year have been as follows:

August 28, 1873, the *Lancaster* left Rio de Janeiro on a cruise to Bahia, coast of Brazil, and arrived at Bahia September 16; on the 29th of September she left for Rio de Janeiro, arriving there October 7. December 23 she left for Key West, Fla., and arrived on the 25th of January, 1874, having touched at St. Thomas, West Indies. From January 25, 1874, to May 11, she was serving in the Key West fleet in Florida Bay, the Gulf, and at Key West. May 12 she left the bar at Key West and proceeded to her station in the South Atlantic, taking the route of 38° north latitude to the vicinity of the Azores, thence to Cape de Verd Islands, (sighting them,) thence across the line in longitude 26° west, thence to Rio de Janeiro, on July 11, sixty-one days out. July 12 she hoisted the flag of Rear-Admiral Strong, and on August 1 exchanged to that of Rear-Admiral LeRoy. Since her arrival in Rio de Janeiro she has been employed refitting, repairing, getting ready for service, and performing the usual port duties. She was reported ready for sea September 1, and expected to sail about the 1st of November for the La Plata.

The *Monongahela* arrived at Rio de Janeiro on the 22d December, 1873, and on the following day hoisted the flag of Rear-Admiral J. H. Strong, commanding the United States naval force on the South Atlantic station. On the 8th February, 1874, she proceeded to Ilha Grande Bay for exercise with torpedoes, &c., where she remained until the 16th of the same month, when she returned to Rio de Janeiro. On the 26th February she proceeded to the port of St. Catherine's under sail and communicated with the American consul, reaching that port on March 3, and remaining until March 5, when she returned to Rio on the 9th March, remaining as flag-ship. On the 1st of April she proceeded to sea, touching at Cabo Frio on the 14th, and remaining at that point until the 16th; returning to Rio on the 18th, she remained until the 29th, on which date she again proceeded to Cabo Frio, and anchoring in that port remained until May 17, when she returned to Rio, arriving on the 18th, and remained until the 29th of July, upon which date she proceeded to Santos, reaching that port on the 31st of July and remaining until August 1, when she returned to Rio, touching at Ilha Grande Bay on the 2d, and arriving at Rio on the 6th. On the 11th of August the United States steamer Lancaster arrived at Rio, and on the following day the flag of Rear-Admiral Strong was transferred to that vessel.



October 1 she sailed from Rio for the Kergueland Islands for the purpose of taking on board the party stationed at that point to observe the transit of Venus. She will return to Rio after the performance of this service.

The *Wasp* left Montevideo for Ascuncion, Paraguay, September 15, 1873, calling at Buenos Ayres to receive on board General White, United States minister to the Argentine Confederation.

October 31, 1873, she returned to Montevideo and remained there until November 30. From November 30, 1873, to July 31, 1874, she was engaged in surveying the coast between Montevideo and the island of Flores. During this time an area of about seventy square miles was surveyed in that area, between nine hundred and a thousand miles of soundings were run, and over forty thousand casts of the lead taken. In July she visited Buenos Ayres for a week. September 25, 1874, she left Montevideo for Buenos Ayres, disturbances of a political character having arisen in the Argentine Confederation, and was there at last accounts.

The *Ticonderoga*, 11 guns, was detached from the station and left Rio for the United States on the 30th of November, 1873. She was intercepted by orders at St. Thomas, and in pursuance thereof reported at Key West January 22, 1874, for duty on the North Atlantic station.

The *Brooklyn*, now refitting at Norfolk, will sail at an early day for Rio to relieve the *Lancaster* as flag-ship of the station.

#### NORTH PACIFIC STATION.

The force on this station, under the command of Rear-Admiral John J. Almy, consists at present of the *Pensacola*, (flag-ship,) 22 guns; *Benicia*, 12 guns; *Portsmouth*, 14 guns; *Tuscarora*, 6 guns; *Saranac*, 11 guns; and *Narragansett*, 5 guns.

The *Richmond*, attached to the station in the early part of the year, has been transferred to the South Pacific station.

The movements and proceedings of the vessels have been as follows:

*Saranac*, second-rate, wooden, paddle, 11 guns. In October, 1873, the *Saranac*, under the command of Capt. J. O. P. de Krafst, sailed from San Francisco for the Hawaiian Islands, bearing the flag of Rear-Admiral A. M. Pennock, commanding the station. Remained at Honolulu until the 21st of December, when she returned to San Francisco, arriving on the 3d of January, 1874.

In February, 20th, proceeded on a cruise, under the command of Capt. Thomas Pattison, to Mexico and Central America, visiting San Blas, Acapulco, and Panama. Remained at Panama and vicinity, acting under orders from the honorable Secretary of the Navy, engaged in special service connected with the Darien Canal commissioners, with Commander Selfridge, U. S. N. On the 18th of May Rear-Admiral John J. Almy assumed command of the North Pacific station, ~~vice~~ Rear-Admiral A. M. Pennock, and hoisted his flag on this vessel. On the 21st of May, having completed her duties at Panama, the *Saranac* sailed for San Francisco, calling at Acapulco, Mexico, and San Diego, Cal. On the 21st of June arrived at San Francisco, and on the 23d of the same month steamed to navy-yard, Mare Island, at which place she remained, undergoing repairs, &c., and preparing for sea, until the 19th of September. On the 17th of September Rear-Admiral Almy changed his flag from this vessel to the *Pensacola*, in consequence of an intended cruise the vessel was to be sent upon. On the 19th of September the *Saranac*, under command of Capt. W. W. Queen, sailed for Lower Cali-

fornia, to investigate certain reported outrages upon American citizens in the vicinity of La Paz, Lower California. Upon the completion of this she will visit, probably, Guayamas, Mazatlan, and San Blas, calling at La Paz on her return. Was heard from at La Paz on the 17th of October.

**PENSACOLA**, second-rate screw, wooden, 22 guns. This vessel, under the command of Capt. A. K. Hughes, arrived at San Francisco on the 8th of June, 1874, fifty-one days from Callao, Peru, and on the 10th of the month steamed to Mare Island, since which time she has been repairing and receiving a general overhauling. Rear-Admiral Almy hoisted his flag on board of the Pensacola on the 17th of September, having changed from the Saranac.

The officers and crew have been attached to the vessel during the time she has been at the navy-yard, and have been constantly employed on work connected with the vessel. They have overhauled and refitted the rigging, repaired the masts, &c., and overhauled the gun-carriages and other work in the gunner's department. The engineer's departments have also been constantly employed in such a manner as has rendered valuable assistance.

**RICHMOND**, second-rate screw, wooden, 14 guns. In January, 1874, the Richmond, under the command of Capt. Thomas Pattison, arrived at San Francisco from Philadelphia, and joined the naval forces under the command of Rear-Admiral A. M. Pennock, as flag-ship of the station, Capt. J. C. P. Dekrafft relieving Captain Pattison of the command. During the months of January and February, received necessary repairs at the navy-yard, and in March proceeded from Mare Island to San Francisco, at which place remained at anchor until the 21st of May, when she sailed for Panama, under the command of Commander B. Gherardi, to become the flag-ship of the South Pacific station.

**BENICIA**, second-rate, wooden, screw, 12 guns. This vessel, under the command of Capt. A. G. Clary, was at Panama during the months of October, November, and December, 1873. While at that place took active part co-operating with the United States steamer Pensacola (then flag-ship of the South Pacific station) in protecting American citizens and their property during the revolution in the fall of 1873. In January, 1874, Capt. William E. Hopkins relieved Capt. A. G. Clary of the command and sailed for the Hawaiian Islands, arriving at Honolulu in February, since which time she has remained there, making, at intervals, short cruises to and from the various islands of the group. Authority has been given for the Benicia to convey the king of the Hawaiian Islands to San Francisco, if his Majesty so desires it, and it is expected that she will sail about the middle of November.

**PORTSMOUTH**, third-rate, wooden, sails, 14 guns. This vessel was attached to the United States naval force on the North Pacific station in the month of May, 1874, previous to which date she had been engaged in special service in the North Pacific Ocean, on surveying duty. Immediately after joining this squadron she was hauled alongside the dock at the navy-yard and remained there, undergoing repairs and alterations, until the 18th of August, when she hauled into the stream; from that date, engaged in preparing for sea, and on the 14th day of September, by order of the Navy Department, sailed for Alaska, carrying a committee of Icelanders (3) to ascertain the feasibility of establishing an Icelandic colony in that territory.

**TUSCARORA**, third-rate, wooden, screw, 6 guns. This vessel for the past year has been engaged in surveying duty in the North Pacific

Ocean, under the command of Commander George E. Belknap. On the 11th of October the Tuscarora became attached to the North Pacific station, Commander H. Erben assuming the command. She remained at Mare Island, prepared for sea, under orders for Honolulu, as the relief of the Benicia, awaiting special orders from the Navy Department, until the 30th of October, when she sailed for the Hawaiian Islands. On her way to Honolulu, she will run a line of soundings, at distances apart of 30 miles.

NARRAGANSETT, Commander George Dewey. Although not *attached* to the North Pacific squadron, the Narragansett has been on the station for the past year, engaged on special services, surveying.

#### SOUTH PACIFIC STATION.

The vessels now on this station are the Richmond, flag-ship, 14 guns, Omaha, 12 guns, and Onward, 3 guns. The movements of the vessels have been as follows:

RICHMOND, flag-ship. The Richmond arrived at Valparaiso, October 4, 1873; thence 25th, arriving at San Francisco December 4; thence the 6th, arriving at Mare Island on the same day. Sailed from Mare Island January 14, 1874, bearing the flag of Rear-Admiral A. M. Pennock, who assumed command of the South Pacific station January 31, 1874, and arrived at San Francisco March 4. On the 28th of April Rear-Admiral Pennock hauled down his flag, and on the 29th of April she sailed for and arrived at Mazatlan May the 30th, having stopped two days at Magdalena Bay; thence June 6, arriving at Panama the 30th; sailed August 3d, arriving at Tobago Island September 14, having received, August 11, 1874, Rear-Admiral Napoleon Collins, who hoisted his flag on that day as commander of the South Pacific station. Sailed on the same day and arrived at Panama the 28th.

OMAHA.—The Omaha sailed from Coquimbo, September 1, 1873, and arrived at Valparaiso the 11th; thence October 28, arriving at Juan Fernandez October 31. Sailed November 2, and arrived at Caldera the 5th; thence the 10th, arriving at Arica the 17th. Left Arica November 20, and arrived at Callao the 26th. Sailed from Callao December 7, and arrived at Panama the 20th. Left Panama January 26, 1874, and arrived at Tobago Island on the same day; thence February 5, arriving on the same day at Panama. Sailed from Panama February 6, and arrived at Callao March 25. Remained at Callao until April 25, when she sailed, arriving on the same day at Chorillos. Left Chorillos April 29, arriving the same day at Callao; thence May 22, arriving at Panama the 13th; thence the 22d, arriving at Guayaquil, June 24. Left July 7, arriving at Payta the 12th. Sailed August 16, arriving at Callao September 2.

PENSACOLA.—On the 23d of October, 1873, the Pensacola, 22 guns, then attached to this station as flag-ship, sailed from Panama to Callao, where she remained, cruising at intervals on the coasts of Chili and Peru, until April 18, 1874, when Rear-Admiral John J. Almy having shifted his flag to the Omaha, she sailed for Mare Island to receive new boilers.

ONWARD.—The Onward has been stationed during the past year at Callao, Peru, as store-ship for the South Pacific station.

#### ASIATIC STATION.

The following vessels comprise the force now on the Asiatic station: Hartford, (flag-ship,) 18 guns; Monocacy, 6 guns; Saco, 3 guns; Lack-

awanna, 10 guns; Palos, 6 guns; Yantic, 3 guns; Kearsage, 6 guns; Ashuelot, 6 guns.

The movements of the vessels on this station during the past year have been as follows

The *Hartford* arrived at Hong-Kong December 8, 1873, and sailed thence January 15, 1874, arriving at Macao on the 16th. Left Macao on the 2d of February, and arrived at Hong-Kong the same day; thence the 10th of April for Yokohama, via Nagasaki—for the purpose of coaling—and the Inland Sea, reaching Yokohama on the 21st of April. Sailed from Yokohama July 11, and arrived at Kobe July 13; thence July 27, visiting four of the harbors of the Inland Sea, viz: Uchi-no-uma, off Yoko Island, Simma-saki Straits, Furnice Bay, arriving at Nagasaki July 31.

The repairs to the *Monocacy* having been completed, she left Yokohama December 2, 1873, and arrived at Shanghai on the 8th; thence, the 9th of December, and arrived at Hong-Kong on the 13th of January, 1874. Left Hong-Kong for Macao on the 28th, arriving on the same day; thence, the 31st of January, back to Hong-Kong. Sailed for Saigon on the 5th of February, arriving on the 9th; thence the 12th, and arrived at Bangkok on the 16th; thence on the 27th of February, and arrived at Singapore March 3. Left Singapore March 11, and arrived at Manila the 20th, remaining until March 30, when she sailed for Hong-Kong, arriving on the 4th of April. Leaving Hong-Kong on the 14th of April, she arrived at Amoy on the 18th; thence the 23d of April, arriving at Kelung the 26th; thence the 27th for Tamsui, arriving on the same day. Left Tamsui on the 28th of April and arrived at Tainampoo on the 29th; thence on the 30th of April, arriving at Takow on the same day. Left May 2 for Amoy, arriving on the 3d. Remained at Amoy until the 27th of May, when she sailed for Lian-Kean Bay, arriving on the 28th; thence for Amoy, which she reached on the 29th. Sailed thence on the 29th of June, and arrived at Tsing-Sui Island on the 30th. On the day of her arrival, she sailed for and reached Amoy, where she remained until the 25th of July, when she left and arrived at Foochow on the 26th; thence on the 28th, arriving at Shanghai the 30th of July for repairs.

The *Saco* remained at Yokohama from the 15th of September, 1873, until the 22d of May, 1874, when she sailed and arrived at Nagasaki on the 27th. On the following day she left and arrived at Che-foo on the 1st of June; thence July 19, and arrived at Nagasaki on the 26th. Left September 3d for Shanghai, in order to make necessary repairs to machinery and boilers, arriving September 6.

The *Lackawanna* arrived at Nagasaki October 30, 1873, where she remained until January 15, 1874; thence to Shanghai, arriving on the 19th. Left February 23 for Nagasaki, where she arrived on the 26th. Sailed April 3 for Hong-Kong, arriving the 9th; thence April 21 for Nagasaki, arriving the 30th. Sailed May 3 for Yokohama, arriving the 7th. Left July 3 for Kobe, which she reached the 6th; thence the 14th, and arrived at Nagasaki the 21st; thence August 20 for Yokohama where she reached the 29th, for the purpose of undergoing repairs.

The *Palos* having been repaired at Yokoska, left that port November 28, 1873, and arrived the same day at Yokohama; thence December 11 for Nagasaki, arriving the 16th; thence the 20th for Shanghai, arriving the 23d. Sailed from Shanghai February 12, 1874, arriving at Nagasaki the 15th. Left Nagasaki April 18, and arrived at Che-foo the 22d. Remained at Che-foo until June 17, when she sailed for Tungchow, arriving the 18th; thence the 19th for Che-foo, arriving the 20th;

thence July 7 for Tien-Tsin, where she reached on the 8th; thence August 8 for Nienchwang, arriving the 11th. Sailed the 28th, arriving at Chefoo on the 29th, *en route* for Tien-Tsin, to remain for the winter.

The *Yantic* sailed from Shanghai October 20, 1873, calling at Amoy from the 23d to the 25th; Swatow from the 26th to the 28th, reaching Hong-Kong on the 29th; thence November 11 for Manila, arriving the 14th; thence the 22d for Ilo Ilo, arriving the 24th. Sailed on the 29th for Zebu, arriving on the 30th; thence December 6, calling at Soo-loo from the 8th to the 9th; Labuan from the 13th to the 15th; Brunai River from the 15th to the 18th; Labuan from the 18th to the 22d; Batana from the 30th to the 9th of January, 1874, when she left and arrived at Singapore the 14th. Sailed February 13, for Royalist Haven, arriving the 16th; thence April 19th for Labuan, arriving the 22d; thence the 25th for Saigon, arriving March 8. Left Saigon March 14, and arrived at Cocanut Bay on the same day. Sailed the 25th and reached Hong-Kong April 1; thence April 10 for Canton; thence back to Hong-Kong, arriving the 17th. Sailed from Hong-Kong April 25, and arrived at Shanghai May 3; thence July 13, arriving at Nagasaki the 16th; thence July 20 for Amoy, arriving the 24th.

The *Kearsarge* sailed from San Francisco March 4, 1874, stopping at Honolulu eight days, and arrived at Yokohama May 11, where she remained until August 13, when she sailed for Nagasaki, arriving the 18th; thence September 11 for Vladovostok, with Professor Hall's scientific party, arriving on the 8th.

The *Ashuelot* left Yokoska November 23, 1873, for Yokohama, arriving on the same day, where she remained until April 10, 1874, when she left for Nagasaki, arriving on the 15th; thence the 18th for Shanghai, arriving on the 21st. Sailed May 8 and arrived at Nankin on the 21st; thence May 25, stopping at Kinkiang two days, Hankon eleven days, Nienchwang one day, Takon one day, Ichang eighteen days, returning to Shanghai July 21. Sailed August 3, and reached Nagasaki on the 5th. Left September 3, and arrived at Tien-Tsin the 8th, with Professor Watson's scientific party.



# APPENDIX

## No. 1.

### ESTIMATES SECRETARY'S OFFICE, &c.

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Navy Department building.*

Detailed objects of expenditure and explanations.	Estimated amount of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1874.
<b>SALARIES.</b>		
For salary of superintendent, (appropriated, 17 Stat. at L., p. 502, sec. 1)....	\$250 00	
For salaries of five watchmen, at \$720 each, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3.) and July 12, 1870. (16 Stat. at L., p. 250, sec. 3).....	3, 600 00	
For salaries of two laborers, at \$720 each, per act of March 2, 1865, (12 Stat. at L., p. 454, sec. 1.) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	1, 440 00	
	5, 290 00	\$5, 290 00
<b>CONTINGENT EXPENSES.</b>		
For incidental labor, fuel, lights, and miscellaneous items, (appropriated, 17 Stat. at L., p. 502, sec. 1) .....	7, 000 00	7, 000 00
<b>NAVY.</b>		
<b>CONTINGENT EXPENSES.</b>		
Rest and furniture of buildings and offices not in navy-yards, expenses of courts-martial and courts of inquiry, boards of investigation, examining boards, with clerks' and witnesses' fees, and traveling expenses and costs; stationery and recording, expenses of purchasing paymasters' offices at the various cities, including clerks, furniture, fuel, stationery, and incidental expenses, newspapers and advertising, foreign postage, telegraphing, foreign and domestic; copying, mail and express wagons, and livery and express fees, and freight, all books for the use of the Navy, exports fees, and costs of suits; commissions, warrants, diplomas, and discharges; relief of vessels in distress, and pilotage, recovery of valuables from shipwrecks, quarantine expenses, care and transportation of the dead; reports, professional investigation, and information from abroad, and all other emergencies and extraordinary expenses arising at home or abroad, but impossible to be anticipated or classified, (appropriated, 17 Stat. at L., p. 547, sec. 1) .....	125, 000 00	100, 000 00

## No. 2.

### NAVAL ACADEMY.

#### REPORT OF THE BOARD OF VISITORS.

UNITED STATES NAVAL ACADEMY,  
June 1, 1874.

SIR: The Board of Visitors, having attended the examination which has just closed at this academy, submits for your information the following report:

The board entered upon its duties on the morning of May 20, and organized by the selection of Rear-Admiral William Reynolds, United

States Navy, as president, A. A. Sargent, United States Senate, as vice-president, and Prof. N. M. Terry, United States Naval Academy, as secretary.

For the purpose of observing the examinations in progress, and securing a proper insight into the "discipline, police, and general management of the academy," as well as of its present and future needs, the board divided itself into committees.

These committees examined in detail the matters assigned to them, and reported to the board verbally and in writing the results of their investigations.

The superintendent was invited to attend the meetings of the board whenever he might deem it advisable, and specially to bring before it such matters as he might regard worthy of its attention. He was also formally requested to cause the heads of the various departments of instruction and administration to present their views, in writing, upon all questions pertaining to the improvement of their respective departments. It is but proper to say that all the officers and instructors of the academy cheerfully co-operated in assisting the board of visitors in their labors, and hence the board feels justified in saying that its conclusions are based upon as thorough an understanding of the subjects under consideration as could be had in the short time allowed.

The board is unanimous in commending the high state of efficiency the Academy has reached in all its departments, and in saying that it is in every way worthy of the Government and the country. Its administration under Rear-Admiral Worden, and his worthy predecessors, has been such as to secure a high degree of moral and intellectual development among the young men committed to their care, and the board does not doubt that the cadets of the academy are now as free from vicious habits and practices, and are controlled by as high a standard of morals and honor as the students of any educational institution in this country. The board thus commends the moral tone of the academy after examination and especial consideration, their attention having been particularly directed to this subject by some criticisms of a part of the public press, which are unfounded. The board believes the cadets are under the best influences, and the results are fairly shown by their general good conduct.

The suggestions and recommendations submitted by the board must not, therefore, be understood as reflecting upon the administration, but rather as indicating the means by which the admirable system of education already adopted and in successful application may be still further improved.

The conclusions and recommendations of the board are embraced in the following subdivisions, corresponding to the principal committees into which the board was divided :

### 1.—GROUNDS AND BUILDINGS.

The grounds are well kept and admirably policed, and have been considerably extended by the purchase of a lot of land adjoining the old grounds on the north, and next to the river. It is difficult to see wherein they need at present to be further enlarged, though it is believed that the square lying southwestwardly of the grounds could, if bought, at some future day be used to the advantage of the institution.

The buildings are in the main well designed, and are generally sufficiently commodious for the purposes for which they are used. This board, however, fully concurs in the recommendations of the previous board in reference to the vacation of that part of the barracks now used

for kitchen and laundry purposes, and the construction of a building specially designed for those uses ; also in reference to a new armory, and the enlargement of the buildings occupied by the departments of "Steam-Engineering," and "Physics and Chemistry."

It is gratified to find that provision has been made for the systematic instruction of the students in swimming and aquatic gymnastics, and that the superintendent has regarded it as fully within his discretion to issue the necessary orders and detail a proper instructor for the organization of the exercises and instruction in this department, without asking for a special appropriation.

The board is also of the opinion that provision for securing the proper ventilation of the cadets' barracks and recitation-rooms should be made under the supervision of a competent architect.

All the rooms visited were found to be heated by steam, and to be ventilated through the doors and windows, and while there is no doubt that plenty of air can be had by these means, there is equally no doubt that such means are not compatible with proper sanitary regulations.

It is well known that they are productive of draughts, accompanied by extremes of heat and cold, and followed frequently by colds, coughs, and even graver diseases. It is recommended also that application be made to Congress for an appropriation sufficient to establish suitable quarters for officers of the school, who are now obliged to seek quarters in the town outside of the institution grounds. The recommendation is strongly made, since all our examinations show that the officers connected with the institution should reside within its grounds.

#### COURSE OF STUDY.

The board is of the opinion that the appointments of candidates should be made one year in advance of their entry into the academy, as is now required by law at West Point, and that no one shall be admitted into the academy who has not attained the age of 16 years, or who is over 18 years of age.

2d. The board is of the opinion that instruction in vocal music should be furnished to all the classes, as often as once a week, during the entire academic term.

The object of this is not only to furnish an accomplishment, the value of which is so generally appreciated, but to strengthen and cultivate the voice for the uses of actual service. Incidentally it may be stated that chorus and solo singing is a social enjoyment, which has a refining and purifying influence upon young men entirely disproportioned to the cost of the instruction necessary for its attainment.

3d. The board is also of the opinion that a course of instruction in naval (and, if possible, military) history should be established for the highest class at least, and that this course should include the history of navies and maritime warfare, with an explanation of the principles of naval tactics and strategy, as shown in the great naval battles of ancient and modern times. Particular attention should be paid to the naval history of the United States.

It is believed that there are several officers in the Navy at present amply qualified to prepare a text-book, or a course of lectures, which would embody everything essential in this branch of a naval officer's education, and point the way for investigations and study after graduation.

4th. The board also suggests and strongly recommends that the principles of iron-ship-building shall be incorporated into the course of instruction. This could probably be most advantageously done by



extending the instruction now given in reference to the principles of wooden-ship-building and naval construction. In this connection the board begs to submit the following suggestion in reference to the extension of the course of steam-engineering :

The act of Congress, approved July 4, 1864, provides that the "cadet-engineers who are graduated with credit in the scientific and mechanical class of the Naval Academy, may, upon the recommendation of the academic board, be immediately appointed by the Secretary of the Navy as assistant naval constructors."

In order to carry out the obvious intention of this wise provision of the law, the board recommends that the course of instruction now assigned to the cadet-engineers, be extended so as to include the "theory and practice of iron-ship-building," and beg leave to renew the recommendation of the Board of Visitors of last year in regard to the enlargement of the buildings devoted to steam-engineering.

5th. In the department of seamanship, the course of instruction pursued at present seems to meet all the demands in this important branch of the education of a naval officer, and no change is recommended in the system now in vogue.

The cadet-midshipmen have every opportunity afforded them to acquire a practical knowledge of the details of the duties of seamen and of officers, and the very satisfactory results of their examinations and the proficiency of their drills in the exercise of sails, spars, and boats, are good evidence that they have not failed to improve the very great advantages offered by the academy in these particulars.

Their exercises at the "great guns," and at "quarters" on board the *Santee*, at the howitzers and mortars, fencing, at signals, and as infantry, were most admirably performed, and deserve the highest commendation of the board.

Their proficiency in object and lineal drawing, the study of navigation, in nautical surveying, and in steam-engineering, is quite in keeping with their progress in the other branches of their profession already noticed.

After completing a four-years' course of study and exercises at the academy, and having had the experience at sea of the practice-cruises during the summer months, the midshipman, by his further service at sea in cruising ships of war for two years, as is now the rule of the Department under the law extending the term of instruction, should not fail to deserve his promotion, as a highly-educated officer of the Navy, on undergoing his final examination at the end of his six years of study and of service.

In order, however, to further improve the period of two years of service at sea in cruising-ships, the board recommends that a course of reading and study be pursued in naval tactics and strategy, international law, the law and practice of courts-martial, naval and general history and the modern languages, that shall be in advance of the standard as now fixed in those branches for the graduating class, so that a stimulus to acquire further proficiency in those branches shall not be wanting after the midshipman leaves the academy.

6th. During our examination, our attention has been called to the advisability of exempting the fourth-class cadet-midshipmen from the study of French, and of including the study of Spanish in two years of the course instead of one. The reasons given seem to have weight, and have so impressed us that we ask your attention to the subject, as the whole matter is within the control of the academic board, to whom it may be properly referred.

7th. The instruction in mathematics, chemistry, history, drawing, law,

languages, ethics, and religious instruction, is commended for the faithfulness with which the various instructors have performed their duties, the ready and courteous facilities given the committee to hear and see their method of teaching and the progress of the several classes.

The young gentlemen have also shown a commendable degree of progress in their studies, as a rule, and if some have failed, it is due rather to their neglect of their high opportunities, or to deficiency in preparatory training, and not to any remissness or want of sympathy on the part of their instructors.

In the department of law, the progress of the pupils has been highly commendable, and their written examinations on "international and maritime law" have been generally of a high order of merit, and would be creditable to the graduates or any law-school. We believe that a course in the law of naval courts-martial might be profitably added to the present course.

The course of practical instruction in seamanship and naval tactics, and in steam-engineery, would be materially advanced by having stationed at the academy, instead of the Dale, a modern steam sloop-of-war, with light spar-deck; and in place of the boats for naval tactics, at least six steam-launches, similar throughout.

With these means in use, there would be no reason why excellent deck-officers and practical engineers should not be found at the academy, in addition to the already well-trained theoretical students.

This suggestion is based upon the earnest recommendation of the superintendent of the academy.

The proficiency of the cadet-engineers in all the branches of steam-engineering embraced in the course in use at the academy, including drawing—as developed by their oral and written examinations, and as exhibited by the specimens of the latter—is highly satisfactory. The use of working-models, and other various appliances for exhibiting the operation of steam-machinery, under competent instruction, gives to these young gentlemen sufficient opportunities to perfect themselves in their branch of the naval profession, and it is quite evident to the board that these opportunities are well improved.

The cadet-engineers share in all the studies and exercises of the cadet-midshipmen, except those pertaining to seamanship, gunnery, and navigation, and have, also, the advantage of making a practice-cruise during the summer months, in a screw-steamer, as an equivalent to the cruise of the cadet-midshipmen in a sailing-ship.

#### FINANCES.

The board are able to add nothing to the report made by the Board of Visitors of 1872, on the subject of the management of the financial affairs of the academy, and heartily concur in the commendation therein expressed, as to the clear and orderly manner in which all the accounts are kept.

#### LIBRARY.

The board has visited the library of the academy, and find the same kept in admirable order, and every facility offered the officers and students to improve their leisure hours.

#### DISCIPLINE.

While commending in the most cordial terms the general discipline of the academy, the board desires to invite your attention to several points which it deems of vital importance.

The attention of the country has been strongly directed of late years to the matter of "hazing." The board has no hesitancy in saying that

there is no difficulty in putting a complete stop to this disgraceful practice, if the proper authority to act be given to the Academic Board.

The board recommends the enactment of a law requiring the Secretary of the Navy to dismiss, on the recommendation of the Academic Board, any student guilty of cruelty to comrades; and that such dismissed person shall be henceforth ineligible to re-appointment in the academy.

2. The object of the demerit system is, or ought to be, purely to discipline the youths of the academy. In the opinion of the board it should be applied not so much with the idea of accumulating demerits against individuals, as to teach them how to control themselves by the observance of laws and regulations, and to enable the authorities to make comparison between the members. The feature of the system in operation here, which lessens the number of demerits which the members of the different classes can get as they become older in the institution, is one perfectly proper and just.

Youths, especially without experience, when entering upon a course of life new to them, err frequently from ignorance and heedlessness, as well as from defective early training. As they advance in years they do not always improve in this respect, more especially if no additional inducement is offered to them. It is believed that, with the majority of the young men who enter this institution, the hope of reward is a more powerful incentive than the fear of punishment.

In addition to this, the road for reform should be left open even to the last moment. It is therefore recommended that the regulation which now authorizes the superintendent to remove a certain number of demerits, whenever it appears that a student shall have become worthy of it by good conduct, shall be continually enforced, and still further extended by removing, say 20 or 25 demerits when a student—

1st. Shall have been selected at, say, four successive inspections as the “most proficient of his class in drills at seamanship.”

2d. Shall have been reported by his instructor, say, four successive weeks as the “best behaved member in his recitation-room.”

There is another matter which affects the subject of discipline in a marked manner: the habit which some parents have of sending their sons large sums of money for use at the academy. The theory of the institution, and its practice, so far as the authorities here can carry it out, is to maintain perfect equality between the students. The pay of the cadet is ample for providing him with everything he needs at the academy, besides giving him a reserved fund with which to purchase his officer's outfit when he graduates.

With economy he can do even better than this, and save a portion of his pay. The amount of pay still due the corps of cadet midshipmen, over all expenses, is now \$11,422.83, exclusive of the pay reserved for equipment, which amounts to \$45,826.99.

It will be seen from this statement how totally unnecessary any outside pecuniary assistance is; and when it is considered what objectionable habits of extravagance are induced by the action of parents and guardians in furnishing money to their sons or wards, that they are not only acting in violation of the regulations of the academy, but creating a distinction between their own sons and their comrades whose parents have not the means for similar indulgence; it is obvious how deleterious the practice is to the welfare of the academy.

So strongly are the members of the board impressed with the importance of this subject that they think every means should be taken to prevent students from receiving money from abroad, and recommend that it be made a condition to all appointments in the academy that the parents or guardians shall bind themselves not to send, or permit to

be sent to the students any money without the consent of the superintendent, and in no case to remit any funds except through the superintendent.

The attention of the board has been directed to the practice among some of the students of running up debts with merchants and others in the city of Annapolis, and paying the same at the time of their graduation out of their "reserved pay."

The board thinks, as it has heretofore said, that the pay of the students of the academy is quite sufficient for all necessary purposes, and that the practice of making debts in this way is calculated to inculcate habits of extravagance that follow the officer after his graduation and promotion into the Navy.

The board, therefore, recommends that the practice be forbidden, and that such action be taken as will effectually end it.

The board recommends that no permission to use tobacco in any form be given any cadet while in attendance at the academy. It is almost universally conceded that the habit of using tobacco is a bad one, and young men should therefore be kept from its influence as long as possible. In the opinion of the board the plea that, if permission be not given, the habit will be surreptitiously indulged, does not justify the giving of such permission. The same plea would excuse any other bad habit, the use of intoxicating drinks or licentiousness.

If the use of tobacco be forbidden to the cadets the greater portion of them will obey the regulation, and thus be saved from a pernicious habit. Besides, we doubt if perfect good faith to the parents who intrust their children to the fostering care of the Government at the academy comports with the encouragement of any habit in the cadets which the parents themselves generally would forbid, if they could.

The board recommends a small appropriation for the construction of glass cases for the preservation of the battle-flags of foreign wars, now deposited at the academy. These trophies, for the want of such protection, are rapidly going to decay from moth and dust.

The board recommends that all heads of Departments, except those purely professional, be made permanent on a like footing and with similar advantages as to rank and pay as those at West Point.

Respectfully submitted.

WM. REYNOLDS,  
*Rear-Admiral U. S. N. and President of the Board.*

A. A. SARGENT.

EUGENE HALE.

JOHN GIBBON,

*Brevet Maj. Genl., U. S. A.*

WILLIAM AIKEN.

LEWIS E. PARSONS.

JNO. P. VINCENT,

*Prest. Judge 6th Dist. Pa.*

DAVID P. DYER.

W. H. MORGAN, of Mo.

J. L. G. MCKOWN, D. D.

J. H. WILSON.

W. H. SHOCK,

*Chief Engineer, U. S. N.*

S. B. LUCE,

*Captain, U. S. N.*

Attest:

N. M. TERRY, *Secretary.*

## REPORT OF SUPERINTENDENT NAVAL ACADEMY.

No. 182.]

UNITED STATES NAVAL ACADEMY,  
*Annapolis, Md., October 31, 1874.*

SIR: I have the honor to report that, in obedience to the orders of the Department, my flag was hoisted here on the 22d ultimo, Capt. K. R. Breese, the commandant of midshipmen, remaining in command during my absence on special duty until the 29th of the same month, when I assumed the duties of superintendent.

At that time the practice-ship *Constellation* and steamer *Mayflower* had already arrived from their summer's cruise, the students had been disembarked and gone into quarters, and the examination for the admission of candidates was in progress and nearly concluded.

The admirable condition and very high state of efficiency in which the Naval Academy was left by my distinguished predecessor, Rear-Admiral J. L. Worden, left me little to do but to continue the routine of his administration and to follow in his steps. I feel under great obligations to him for the care he has taken to make my succession easy and agreeable.

The candidates for appointment as cadet-engineers were subjected to a careful and thorough competitive examination, and a sufficient number of those pronounced most proficient appointed in conformity with the law, notwithstanding the fact that they had not generally attained that proficiency in the studies in which they were examined, which it is desirable they should possess on admission.

This may be said of the candidates who presented themselves for admission as cadet-midshipmen, for out of one hundred and five, (105,) forty-four (44) were found by the academic board not duly qualified for admission, eight were physically disqualified for the service, and fifty-three (53) were found duly qualified and admitted into the academy.

Since the conclusion of the examinations for admission, the re-examinations, and the subsequent action of the Department thereon, there remain in the academy two hundred and forty-six (246) cadet-midshipmen and forty-six (46) cadet-engineers, making a total of two hundred and ninety-two (292) students.

I transmit herewith for the information of the Department copies of the reports of Captain K. R. Breese, U. S. N., of the cruise of the practice-ship *Constellation*, and of Lieut. Commander O. A. Batcheller, of the cruise of the practice-steamer *Mayflower*.

I also inclose a duplicate of the estimates for the academy for the fiscal year ending June 30, 1876, prepared by my predecessor, and called for by the communication of the Department, bearing date the 1st instant.

I am, sir, very respectfully, your obedient servant,

C. R. P. RODGERS,  
*Rear-Admiral, Superintendent.*

Rear-Admiral WM. REYNOLDS, U. S. N.,  
*Acting Secretary of the Navy.*

## REPORT OF CRUISE OF THE CONSTELLATION.

UNITED STATES PRACTICE-SHIP CONSTELLATION,  
*Annapolis Harbor, September 26, 1874.*

ADMIRAL: In obedience to the order of the superintendent, I have to submit the following report of the practice-cruise of this ship under my command :



I assumed command on the 18th day of May, with the following-named officers :

Lieut. Commander P. H. Cooper, executive officer.  
Lieut. Commander P. F. Harrington, navigator.  
Lieut. Commander A. G. Caldwell, senior watch-officer.  
Lieut. Commander John Schouler, watch-officer.  
Lieut. W. H. Brownson, watch-officer.  
Lieut. Asa Walker, watch-officer.  
Lieut. E. D. F. Heald, watch-officer.  
Paymaster Joseph A. Smith, U. S. N.  
Surgeon James H. Tinkham, U. S. N.  
Chaplain John R. Matthews, U. S. N.  
Assistant Surgeon W. J. Cronyn, U. S. N.  
First Lieut. D. Pratt Mannix, U. S. M. C.  
Acting Gunner Robert Sommers, U. S. N.  
Boatswain Andrew Milne, U. S. N.  
C. M. McLeod, clerk to commandant of midshipmen.  
F. C. Adams, paymaster's clerk.

The ship arrived at Annapolis on the 16th May, 1874, was admirably fitted out, and having above an average crew. Under the able administration of the executive officer she made a most excellent appearance, and the few days before the embarkation of the midshipmen, which took place on the 8th of June, sufficed to place the ship in such routine order that the sudden acquisition of 127 cadet-midshipmen, with their anomalous position, did not disturb the routine, and the midshipmen fell as quietly into their places and stations as if but an every-day affair.

There were 36 cadet-midshipmen of the first class, 14 cadet-midshipmen of the second class, 66 cadet-midshipmen of the third class, 11 cadet-midshipmen of the fourth class, embarked for the cruise.

They occupied the whole of the berth-deck, being crowded themselves and crowding the ship's company, consisting of 222 people, into even narrower limits ; still every person had a berth, such as it was.

The ship left the roads on the 13th of June and proceeded to Hampton Roads, arriving there the next day. Here a delay of four (4) days was caused by the repairs of the spar-deck capstan.

On the 18th of June got under way and proceeded to sea, steering a course E.S.E. until across the Gulf-Stream.

The weather, though generally fine, was varied enough to get most of the cadet-midshipmen sea-sick and give them that taste of their life.

Cruising between this point and Montauk, the general routine as established was carried out.

On the 2d of July the surgeon reported that Lieutenant-Commander Cooper, the executive officer, was in a deplorable condition through enlargement of the spleen, heightened in effect by his zealous attention to his arduous duties, and recommended that he should be sent out of the ship as soon as possible. Accordingly, we ran into Gardiner's Bay, where Lieutenant-Commander Cooper left, having been condemned by medical survey. This necessitated the following changes in the ship : Lieutenant-Commander Harrington became the executive officer, and Lieutenant Walker, who had been the assistant to the navigator, became the navigator.

From this time till September 7 the ship was in and about Long Island Sound, with the exception of six (6) days spent at Newport, to witness the torpedo-practice made before the congressional committee.

On the 3d of September the ship left New London for this place, but owing to the heavy weather outside of Montauk I came through the

sound, and by way of Sandy Hook arrived at Hampton Roads September 10.

After a stay of six days at Hampton Roads, a part of the time being detained by bad weather, the ship left for a cruise in the lower Chesapeake, en route for Annapolis.

On the 19th, when off the Wolf Trap, we communicated with the *Triana*, and received orders from the superintendent to be at the Patuxent on the 20th, and at Annapolis Roads on the 22d, arriving there as directed.

The midshipmen of the first and second classes were taught navigation, under Lieutenant-Commander Harrington, until he became executive officer, and then under Lieutenant Walker.

The log-books, seamanship notes, &c., of the first class, were specially under Lieutenant-Commander Caldwell, and mistakes corrected under his instructions.

Those of the second and fourth classes were under Lieutenant Heald, and the third class was carefully looked after by Lieutenant-Commander Schouler, assisted by Lieutenants Brownson and Walker.

A number of the cadet-midshipmen found deficient in June and required to pass an examination on their return had Lieutenant Brownson particularly assigned to give advice and instruction.

The customary evolutions and exercises performed during the practice-cruise have taken place, and some others in addition, and the midshipmen have had opportunities to make notes upon them all.

In navigation, everything has been done to give the midshipmen of the first class a knowledge of the use of the sextant, and of the different methods of establishing the position of the ship at sea, and by cross-bearings, where possible.

A very careful system of marking for the results of the midshipmen's work has been adopted, and I have to ask, when laid before you, will receive your earnest consideration.

The value of the practice-cruise as felt by the midshipmen personally beyond the few to receive cadet appointments has amounted to nothing, and the careless and indifferent are even more so, feeling that they are not affected in their class-standing.

Those who have shown an utter want of capacity for the service, or desire to learn, have been received at the academy at the end of the cruise on the same favored footing with those who have striven to benefit themselves by the opportunities offered, and I most respectfully urge that an appreciative value be given to the cruise report, and that where a cadet is found so lamentably deficient in all the requirements of a young naval officer as not to hazard a doubt as to his future usefulness, he should be dropped more promptly than those found deficient in their studies. I can but believe that unless some such plan is adopted the effect of the practice-cruise will be unfavorable to the whole body of midshipmen.

I believe this practice-cruise has differed very little from others; and it being my first, I have been struck with what appear to me great defects. I beg leave to point them out, and to suggest what I think would remedy them.

The practice-ship has an ordinary, picked-up crew allotted to her; it may be good, indifferent, or bad; on this cruise has been exceptionally good, and with an exceptionally good set of petty officers. The crews are put on board, at most, a few weeks before the officers can take them regularly in hand, well or indifferently shaken down by the time the midshipmen come on board.

The third-class man now receives his first impressions of his profession, and the first-class man, with professional intelligence enough, as he thinks, to comprehend, takes in this ship as his standard, a newly commissioned American ship-of-war, with a crew as above alluded to, too much crowded for comfort, and more or less harassed by the extra duties imposed upon them from the character of the ship. Both classes form a part of the ship's company in all respects, save cleaning the ship. Their duties, with this exception, are identical with those of the crew. What more natural thing than for the third-class man to adopt the seaman as his standard, to derive his professional notions from him, and the first-class man to struggle against the habits acquired on his last cruise, and endeavor to fit himself as an officer; and how hard for him to do so, when, for the exception of the time on his particular detail as a midshipman of the watch, or officer of deck, he is still a foremast-hand?

With these duties, it seems to me, there must go the notions and feelings of seamen, and which, I think, would be a most admirable system as establishing the true sympathy that should exist hereafter between the officer and man, arising from a due knowledge of a seaman's duties and condition, did we but retain our men in the service. But our crews have no established character, no homogeneity, and no feelings in common with each other; they come together accidentally, have no preference for the service, and make use of it for the time being, ready to desert at a moment's temptation, and, hence, create an altogether false impression on the young midshipmen.

The midshipmen find themselves pulling beside and sandwiched in between the servants. How distasteful this is every graduate of the academy can speak; how much less distasteful when working beside the seamen only, and if among themselves, taken as a part of the instruction, cheerfully and willingly. Where this unity of duty on the part of the crew and the midshipmen exists, there must be a conformity of sentiment. The utterances of the disreputable are forced upon the ears of the midshipmen, and I feel satisfied that, though every endeavor is made to separate the midshipmen from the men, the morals of the latter affect the former, and to no small extent.

To remedy this, I would suggest that all the practical seamanship be taught at the academy, which could be done to a great advantage by having a properly equipped steam-vessel, manned by cadet midshipmen and cadet engineers, with just enough selected men to do certain duties not expected of cadets. Here they will be surrounded by no other influences than are inherent among them, and which can be reached or provided for. I claim that they can be taught better in this way, and that the knowledge so gained will be of more avail to them as officers, than in the present way, or, at least, with no bad tendencies. Here, also, the officer would derive his true sympathy with the crew from the proper knowledge of the duties and acquirements of a seaman, and acquired without the influences of a seaman of the present practice-cruises.

For the first class, I would suggest that they be sent to sea only as midshipmen, required to learn navigation and study seamanship as on the present practice-cruise. For this purpose the Constellation is admirably adapted; could be kept in commission as a cruiser with a full crew and an extra number of officers. This ship could be considered as a school for instruction of *officers*, and every officer of and below fifty (50) in the grade of lieutenant commander should be made to serve a year in her.



This ship leaving the United States in November, would return in June well ordered and disciplined, and taking on board the first-class cadet-midshipmen, it would matter little where they went, though a visit to Europe would answer better for all concerned.

The benefit to the first-class midshipmen cannot be doubted, and the service generally would profit by this ship for instruction of officers.

It seems admitted that even West Point cannot give the practical instruction to its graduates that is desirable, and artillery schools and torpedo and engineer schools are already established, and cavalry and infantry, it is thought, will come up for the practical instruction of officers.

In our own service we have already a torpedo school. Can we not have a school-ship for instruction of officers, in which the first-class cadet-midshipman can get the ideas of his future formed, and learn his practical navigation? I have only to add that all graduates of the academy with whom I have conversed on this subject, agree with me in my opinions of the practice cruise, as also for the school for officers.

In conclusion, I must state that the happiest relations existed between the officers and myself, and the untiring patience, ability, and care displayed by every officer to a marked degree, gave me the great pleasure of the cruise.

There are but few cases of misconduct that I have to bring to your notice. Generally the midshipmen have behaved most excellently and have shown a most commendable spirit, making the best of their surroundings, and cheerfully and willingly, in spite of discomforts. As a part of the ship's company, in their duties aloft and about the decks, their ability and attention to their duties have excited my admiration, and any one would be glad enough to have so able a body under his command.

This with opinions on all subjects of the cruise is carefully registered in the accompanying reports, and which I beg again to urge upon you, what seems to me, the importance of giving them a value in establishing a final standing of the midshipmen.

Very respectfully, your obedient servant,

K. R. BREESE,

*Captain commanding, and Commandant of Midshipmen.*

Rear-Admiral C. R. P. RODGERS, U. S. N.,

*Superintendent United States Naval Academy,*

*Annapolis, Md.*

---

#### REPORT OF THE CRUISE OF THE MAYFLOWER.

UNITED STATES PRACTICE-STEAMER MAYFLOWER,

*Off Annapolis Md., September 26, 1874.*

SIR: I have the honor to submit the following report of the summer's practice-cruise with the cadet-engineers embarked for instruction:

The cadet-engineers were received on board on Monday, June 8, and assigned hammocks and lockers, arranged in regular watches in engine and fire rooms, and their journals commenced.

The engineers of the vessel were detailed from the academy, and, in addition to their ordinary duties, were charged with the instruction of the cadet-engineers.

The course of instruction pursued has been, on board to teach thor-

oughly the practical duties connected with the care and management of the engine and dependencies of this vessel, such as starting and managing fires under all circumstances, filling boilers and maintaining the water at the proper level and density, the management and regulation of the engine, the uses and management of the steam-pump and its connections, taking indicative diagrams and making computations from them, cleaning, repair, and care of engine and boilers in port, keeping steam-log, making out engine and fire room station-bills, &c.; in short, everything connected with their professional duties on board ship.

On shore: To follow the iron, from its condition as ore, through all its various stages to the completed product; to study the different processes and the means by which the various changes were accomplished; to study the design and construction of engines and boilers and the manner of placing and securing them in position on board ships; to study the working of various types of engines, and to understand the relative advantages and disadvantages of each.

Particular attention has been given to compound engines and their boilers.

Each cadet-engineer has kept a journal of the cruise and a sketch-book, in which he has entered sketches and descriptions of such operations and machinery as were new or instructive.

On all occasions when the cadet-engineers have visited the shore for instructions, they have been accompanied by one of their instructors, and generally by both of them.

We sailed from Annapolis, June 12, for Washington, D. C., and arrived at the navy-yard Saturday, June 13, where we remained until the 22d.

During our stay here, the cadet-engineers visited the machine-shops, forges, foundries, &c., in the yard, and the Patent-Office in the city. In the yard everything of professional interest was explained to them, and notes and sketches made. Very little work was going on, but they had an excellent opportunity of seeing the construction of a very intricate mold for a cylinder of a compound engine, which they also saw poured.

At the Patent-Office they received every attention from the authorities in charge, and such models, &c., as they wished to examine were taken from the cases for that purpose.

We sailed from Washington on the 22d of June for New York, touching at Norfolk, Va., for men to complete our complement, and for coal.

The object in going to New York, at this time, was to enable the cadets to witness the trial of the new compound engines of the United States frigate Tennessee, which was about to take place. We arrived at the navy-yard, New York, June 26, after a very pleasant passage.

I called upon Messrs. John Roach & Co., of the Morgan Iron-Works, and Messrs. Delemater, of the Delemater works, and obtained their cordial permission for the cadet-engineers, with their instructors, to visit their works and witness such manufacturing as was then going on, as well as to make such notes and sketches as they might desire.

At the Morgan works two days were spent, one in looking through the shops where the engines of the Pacific Mail Steamship Company's steamer City of Tokio were being finished. Here they saw the forging of a large shaft and the molding of the Hirseh screw-propeller from patterns.

The second day was spent on board the City of Peking in a thorough examination of her machinery, which is of the compound type. On this visit the cadets were accompanied by Mr. Edward Farron, the designer

of the vessel, who kindly gave them full explanations of everything of interest.

At the Delemater works particular attention was paid to their method of molding screw-propellers, which differs from that in general use in that they cast the driving-face upward.

Mr. Roelker was detailed by the proprietors to accompany the party, and was kind in his attentions.

Through the courtesy of the captain of the navy-yard the steam-tug Rocket was placed at our disposal for the purpose of these visits.

In the navy-yard the various shops, forges, &c., were visited, as well as the new torpedo-boat Alarm, and the iron-clad Colossus, still on the stocks, but with most of her machinery in place. The principal object of interest was the converted compound engine for the Quinnebang, which was erected in the machine-shops, and from which several sketches were made.

The Tennessee was also visited and her machinery carefully examined, and arrangements made for witnessing her trial; but an unfortunate accident to her engines prevented its taking place at that time.

As it was thought by the parties in charge of her that she would be ready again in a few weeks, I decided to proceed east at once and visit the places laid down in my instructions, returning to New York in time for the trial.

Accordingly we sailed for Boston July 9, passing through Long Island and Vineyard Sounds, arriving at the Boston navy-yard July 12, after a very tedious passage, having been compelled to anchor twice on account of thick fogs.

I called upon the proprietors of various manufacturing establishments in this vicinity, and with one exception obtained their cordial permission for the young gentlemen, with their instructors, to visit their works. The exception noted above was in the case of the American Seamless Tube Company, the president of which declined to grant my request, on the ground that their rule was "not to admit visitors."

The cadets visited the Bay State Iron-Works, South Boston, where they were very kindly received by Mr. Crooker, the superintendent. They saw the process of puddling iron and rolling it into boiler-plate and railroad bar; also a Siemens-Martin steel-furnace, which, however, was not in blast.

At the Norway Iron-Works, South Boston, was seen the manufacture of all kinds of bar-iron, especially that to be used in conversion to blister-steel, which process and the ovens used were carefully examined; also the manner of grading the steel for market.

At the South Boston Iron-Works the casting of large guns, by the Rodman process, as well as the manner of boring and rifling them, was fully explained by Mr. Read, the superintendent.

Two large cast-iron guns were in the lathes, one a muzzle-loader, the other a steel-lined breech-loader, the lining-tube for which was imported from Germany.

At the Marine Steam-Engine Works of Harrison Loring, the new engine building for the Seminole, formerly United States sloop of war, was seen, and afforded a good opportunity for instruction on the erection of engines in the shop before being placed on board ship. Here they also saw a new and excellent method of putting in air-pump linings.

At the American Steam-Gauge Works, Boston, the superintendent, Mr. Moor, explained the manufacture of pressure-gauges under various patents, and the method of graduating them by standard gauges, which

in turn are frequently compared with the mercury-column. Also the manufacture of the Richards steam-engine indicators.

At the Atlantic Works, East Boston, they saw two compound engines building for the new sloops, and had an excellent opportunity to inspect the detail parts.

At the East Boston Forge Company's works they saw some large forgings being made under a trip-hammer from scrap-iron.

Through the courtesy of the captain of the navy-yard, a steam-launch was placed at our disposal to visit the works in South and East Boston.

In the yard the cadets visited the various shops, &c. In the machine-shop particular attention was called to some of the machines, which are the largest of their kind in the country. The United States frigate Wabash was visited and the peculiarities of her machinery pointed out; also the sloop Vandalia on the stocks, but receiving her machinery. Advantage was taken of this to explain fully the manner of placing and securing engines and boilers in wooden vessels.

The new Coast Survey steamer Geo. S. Blake, fitted with compound engines, was also visited and examined. Copious notes and sketches were made at each of the places visited.

Having finished with most of the places of interest in Boston and vicinity, and having filled up with coal, we started July 30 for Portsmouth, N. H., where we arrived the same day.

Here the cadets visited the various shops, &c., in the navy-yard; but as very little work was going on, there was not much that was new to be seen. They, however, saw the operation of two kinds of "link-planers" which were started for their benefit.

Visited also the United States sloop Plymouth, being fitted with new boilers and a novel arrangement of superheaters, and the tug-boat Speedwell, fitted with new high-pressure boilers.

We sailed from Portsmouth, N. H., August 3, for Providence, R. I., where we arrived and anchored on the evening of the 4th, after a very pleasant passage, and having stopped off Cape Ann to fish.

Here the Corliss Steam-Engine Works, the Hope Station water-works, and the American Gimlet-pointed Screw Company's works, were visited.

At the Corliss works the party was very kindly received by Mr. George Corliss, who called their attention to a novel arrangement of pumps for city water-works, which was then in operation, the details of which he carefully explained, after which he showed the party through his very extensive shops, where much was seen that was both interesting and instructive.

At the Hope Station water-works were seen the pumping-engines erected by the Corliss company, which have caused so much controversy among hydraulic engineers.

At the screw-works the very interesting process of making screws was seen, as well as the large engine which drives the works.

We sailed from Providence August 9, and, with boilers leaking badly, proceeded through Long Island Sound to New York, where we arrived on the 11th, having been compelled to anchor twice on account of thick weather. Here we remained until the 18th repairing boilers, the cadets meantime visiting such places of interest as they had not seen during our former stay.

Having previously obtained permission, they visited the Quintard Iron-Works, the hydraulic-works of H. R. Worthington, the Chrome Steel-Works, and the White Star steamer Britannic, the tug-boat Rocket being again placed at our disposal.

At the Quintard works they saw another compound engine for a new sloop, a large inverted cylinder-engine for the steamer Alexander, and the boilers for this vessel, which are of a novel design.

The party was indebted to Mr. Quintard, one of the proprietors, for his kind attentions.

At the Chrome Steel-Works the entire process of manufacturing steel by their method was explained by Mr. Hoyhian, the superintendent, after which a number of very interesting experiments were made exhibiting the good qualities of the steel.

At the hydraulic-works of H. R. Worthington & Company were seen all the different kinds of pumps manufactured under their patents.

On board the White Star steamer Britannic they examined her machinery, and particularly the peculiar arrangement for changing the immersion of her screw.

Having completed the repairs to the boilers and filled up with coal, we started August 18th for Cold Spring, N. Y., where we arrived the same day. Here the cadets visited the Cold Spring Foundry, where they saw a large Cornish pumping-engine, the beam alone of which weighed sixty tons, also a novel engine for a street-car, besides the foundry, in which, however, there was but little work going on.

Mr. Paulding, of the firm, kindly accompanied the party through the works.

The only other place of interest here, the Brock Smelting-Furnace, being out of blast, we proceeded to Newburgh, N. Y.

Here the Wright Steam-Engine Works were visited, where various engines fitted with the "Wright cut-off" were seen, as well as a compound engine for a new sloop. The party was accompanied by Mr. Stratton, of the firm, who also took them to the Newburgh Cotton-Factory to see a compound beam-engine recently erected by Wright & Co., and which was said to be working with extreme economy.

On the 21st of August we dropped down to West Point to permit the cadet-engineers to visit the Military Academy.

At daylight of the 22d started down the river bound for Wilmington, Del., where we arrived on the 24th, after a very pleasant passage, and having anchored the previous night off the mouth of Christiana Creek.

I called upon the proprietors of various manufactories in Wilmington, who granted cordial permission for the visit of the cadet-engineers.

At the machine-tool works of Hilles & Jones the party was kindly received by Mr. Jones and shown through the works, and their attention called to several machine-tools peculiar to this firm; also to a very complete set of Whitworth gauges.

At the rolling-mill of Slidell & Hastings, the manufacture of boiler-plate was seen, also a method of working up, in an open-hearth charcoal-fire, cast and wrought iron borings and other scraps, too small to pile.

At the iron-ship-building yard of the Harlan & Hollingsworth Company their very complete system of iron-ship construction, from the mold-loft to the launching-ways, was fully explained by Captain Benson, one of the firm and the free use of the drawing-room and drawings accorded. Here was seen one of the new iron sloops, nearly ready for launching, also a steamer in process of framing, which furnished good opportunities for studying the details of construction. The proprietors left nothing undone to make this visit one of the most interesting and instructive of the cruise.

At the works of Pusey, Jones & Co. the party was very kindly re-



ceived by Mr. Savery, one of the firm, and shown through the works by the superintendent. Very little work was going on, but they saw a steam-boiler slung and hoisted on board, also the "Trempus cut-off," which this firm apply to many of their engines, and a novel portable steam-riveter, the peculiarity of which is that it is moved to the work instead of the work being brought to it.

At the machine-works of J. Morton Poole & Co., the party was taken in charge by Mr. Porter, the superintendent, and shown through the works. He explained their method of grinding and polishing chilled cast-iron rolls for paper-manufacture, by which the great accuracy necessary is obtained. He also pointed out several very ingenious mechanical devices peculiar to these works.

At the Lobdell Car-Wheel Works the process of making chilled cast-iron car-wheels and the manner of forcing them on to axles were seen.

At the Jackson & Sharp Company's car-works, Mr. Auchencloss, the vice-president, explained the manufacture of railroad-cars; also exhibited several very ingenious wood-working machines, and the "Allen" engine which drives the works, from which a number of indicator diagrams were taken, showing the regularity of speed of this engine with widely varying loads. From Mr. Job Jackson, president of the company, we received much kind attention, as well as the free use of their wharf.

Having finished at Wilmington, we sailed for Chester, Pa., on the 29th of August, arriving the same day. Here the fullest permission was given by Messrs. John Roach & Co. for the examination of their works.

The two iron sloops on the ways, and nearly completed, afforded a good opportunity for studying the manner of construction and the quality of work at this yard, and of comparing it with similar work at Wilmington. One of these vessels was launched during our visit, and advantage was taken of it to point out to the cadets the manner of constructing the ways and cradle, as well as the precaution observed in launching. In the machine-shop the engines of these vessels, as well as the one at Wilmington, were being erected. Free access to all drawings was given, and many useful sketches made.

We remained at Chester until September 2, when we proceeded to the navy-yard, Philadelphia. Here the various shops, &c., in the yard, and the establishments of J. P. Morris & Co., William Sellers & Co., Robbins & Co., Neafie & Levy, Bement & Sons, and the Baldwin Locomotive-Works, were visited, permission having previously been obtained.

At the yard, the shops, &c., were visited, but there was little else than boiler-work going on. The attention of the cadets was called to the great care exercised in fitting up this work, all the holes being drilled, and the plates machine-fitted.

The monitor Wyandotte was visited, and the details of the machinery explained. Also the new Quinnebaugh on the stocks, where a method of boring the dead-wood was explained, differing in some points from that already explained to the cadets in the case of the Vandalia.

At the works of J. P. Morris & Co. were seen a Leavitt pumping-engine, a Shaw gunpowder pile-driver, and an Ericsson air-engine, the operation of all of which was explained to the cadets.

Through the courtesy of the captain of the navy-yard, a tug-boat was placed at our disposal for this visit.

At William Sellers & Co.'s were seen the numerous machine-tools manufactured by them; also their Giffard injectors. The very systematic method of carrying on their works was particularly explained by Mr. Brooks, one of the firm.

At Robbins & Co.'s iron-smelting furnace the entire process of con-

verting iron-ore into pig-iron was seen and studied, together with all the modern improvements with which the furnace is fitted. Mr. Robbins kindly accompanied the party and gave full explanations.

At Neafie & Levy's foundery and machine-shops the works were examined, and particular attention was given to their method of molding screw-propellers.

At Bement & Son's Industrial Works was seen, besides the general run of machine-tools made by this firm, a new arrangement of feed-table for a punching-machine, by which the holes can be spaced off to the smallest fraction of an inch.

At the Baldwin Locomotive-Works were seen locomotives in all stages of manufacture, and especial attention was called to a method of calking boilers recently patented by this firm. Mr. Crawford accompanied the party through the works and gave desired explanations.

Having finished with the various places of interest at Philadelphia, and having filled up with coal, we started on the 15th of September for Hampton Roads, Virginia, on our return to Annapolis.

I take pleasure in calling your attention to the uniform courtesy with which the cadets have been received wherever they have visited.

During the entire cruise they have kept regular watches in the engine and fire rooms, their stations being changed by rotation, so as to familiarize each with all the duties.

I am indebted to the officers of the vessel for the zealous interest they have shown in the performance of their duties, and particularly to Passed Assistant Engineers Tower and Manning, the instructors, who have given their entire time and attention to their very onerous duties.

I feel it my duty to represent to you how unsuitable this vessel is for the purpose of the cruise.

Her engine is of a type not to be found in men-of-war, and affords but poor opportunities for imparting a practical knowledge of the more modern machinery now in general use; while her quarters for men and officers are quite insufficient.

The young gentlemen receive their first and most lasting impressions of the naval service on the practice-cruise; and, in order that these should be correct, it is necessary that the routine and etiquette of a man-of-war, as well as the strictest discipline, should be observed. In a vessel of this class, naval etiquette and routine must, of necessity, be set aside to a great extent, and the number of line-officers of suitable rank that can be accommodated on board is scarcely sufficient to maintain strict discipline.

We returned to Annapolis on the 22d September, and the cadet-engineers were landed on the 25th of September.

I am, sir, very respectfully, your obedient servant,

O. A. BATCHELLER,  
*Lieutenant-Commander, Commanding.*

Rear-Admiral C. R. P. RODGERS, U. S. N..  
*Superintendent Naval Academy.*

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1876,  
by the Naval Academy.*

Detailed objects of expenditure and explanations.	Estimated amount which will be re- quired for each detailed object of expenditure.	Amount appropri- ated for the cur- rent fiscal year ending June 30, 1875.
<b>NAVAL ACADEMY.</b>		
Pay Naval Academy:		
One professor of drawing, (head of department).....	\$2,500 00	
One professor of English studies, history, and law, (head of department)....	2,500 00	
Three professors, viz: One of mathematics, one of chemistry, and one of French, (assistants,) at \$2,200 each.....	6,600 00	
Twelve assistant professors, viz: Four of French, one of Spanish, three of English studies, history, and law, one of mathematics, one of astronomy, and two of drawing, at \$1,800 each, (appropriated, 17 Stat. at L., p. 153) ..	21,600 00	
Sword-master, at \$1,500, and two assistants, at \$1,000 each, (appropriated, 17 Stat. at L., p. 153).....	3,500 00	
Boxing-master and gymnast, at \$1,200, and assistant librarian, at \$1,400, (appropriated, 17 Stat. at L., p. 153) .....	2,600 00	
Three clerks to superintendent, at \$1,200, \$1,000, and \$800 each, (appro- priated, 17 Stat. at L., p. 153) .....	3,000 00	
One clerk to commandant of midshipmen, (appropriated, 17 Stat. at L., p. 153)	1,000 00	
One clerk to paymaster, (appropriated, 17 Stat. at L., p. 153).....	1,000 00	
One apothecary, (appropriated, 17 Stat. at L., p. 153).....	750 00	
One commissary, at \$228, one cook, at \$325.50, and messenger to superintend- ent, at \$600, (appropriated, 17 Stat. at L., p. 153) .....	1,213 50	
One armorer, at \$529.50, gunner's mate, at \$469.50, and quarter-gunner, at \$409.50, (appropriated, 17 Stat. at L., p. 153).....	1,408 50	
One cockswain, at \$469.50, and three seamen in department of seamanship, at \$349.50 each, (appropriated, 17 Stat. at L., p. 153).....	1,518 00	
One band-master, at \$528, and eighteen first-class musicians, at \$348 each, (appropriated, 17 Stat. at L., p. 153) .....	6,792 00	
Seven second-class musicians, at \$300 each, two drummers and one fifer, first-class, at \$348 each, (appropriated, 17 Stat. at L., p. 153).....	3,144 00	
	<u>59,126 00</u>	<u>\$58,826 00</u>
Estimate of appropriations required under head of pay of professors and others for the fiscal year ending June 30, 1876 .....	59,126 00	
Amount appropriated under head of professors and others for the fiscal year ending June 30, 1875.....	58,826 00	
Excess.....	<u>300 00</u>	
NOTE.—This excess is occasioned by an increase of pay recommended for the professor of English studies, history, and law, who has recently been placed at the head of that department, with increased responsibilities, mak- ing his pay per annum the same as that received by the professor at the head of the department of drawing.		
Pay of watchmen and others:		
Captain of the watch, at \$2.50 per diem.....	912 50	
Four watchmen, at \$2.25 per diem each .....	3,285 00	
Foreman of the gas and steam-heating works, at \$5 per diem.....	1,825 00	
Ten attendants at gas and steam-heating works of academy and school- ships, one at \$3.50, one at \$3, and eight at \$2.50 per diem each.....	9,672 00	
Three joiners, two painters, and two masons, at \$3.50 per diem each .....	8,942 50	
One tinner, one gas-fitter, and one blacksmith, at \$3.50 per diem each.....	3,832 50	
	<u>28,469 50</u>	<u>30,659 50</u>
Decrease.....	<u>2,190 00</u>	
NOTE.—Decrease occasioned by a reduction of two attendants at the gas and steam-heating works, at \$3 per diem each.		
Pay of mechanics and others:		
One mechanic at workshop, at \$2.25 per diem .....	821 25	
One master-laborer, to keep public grounds in order, at \$2.28 per diem.....	832 20	
Fourteen laborers to assist in same, three at \$2 and eleven at \$1.75 per diem each.....	9,216 25	
One laborer to superintend quarters of cadet-midshipmen, public grounds, &c., at \$2.28 per diem.....	832 20	
Four attendants at recitation-rooms, library, chapel, and offices, at \$20 per month each.....	960 00	
Twenty servants to keep in order and attend to quarters of cadet-midship- men, public buildings, &c., at \$20 per month each.....	4,800 00	
	<u>17,461 90</u>	<u>17,461 90</u>



*Estimates of appropriations required by the Naval Academy, &c.—Continued.*

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
Pay in department of steam-enginery :		
One machinist, at \$3.50 per diem.....	\$1, 277 50	
One machinist, at \$3 per diem.....	1, 095 00	
One blacksmith, at \$3.50 per diem.....	1, 277 50	
One boiler-maker, at \$3.50 per diem.....	1, 277 50	
One pattern-maker, \$3.50 per diem.....	1, 277 50	
One molder, at \$3.50 per diem.....	1, 277 50	
Two laborers, at \$1.75 per diem.....	1, 277 50	
	8, 760 00	\$8, 760 00
For the necessary repairs of public buildings, pavements, wharves, and walls inclosing the grounds of the academy; for improvements of the same, and for furniture, fixtures, &c.....	14, 000 00	14, 000 00
For heating and lighting :		
For fuel for heating and lighting the academy and school-ships.....	15, 000 00	15, 000 00
NOTE.—This estimate for fuel has heretofore been included under the head of contingent expenses, but as the amount is indispensably necessary for the proper heating and lighting of the academy, &c., a separation of it from the items of contingent expenses is deemed desirable, and is therefore made.		
Contingent expenses, Naval Academy :		
For the purchase of books for the library.....	2, 000 00	
For stationery, blank-books, models, maps, &c., and for text-books for use of instructors.....	2, 000 00	
For the expenses of the Board of Visitors.....	2, 600 00	
For printing and binding.....	2, 000 00	
For postage on public service.....	750 00	
For the purchase and repair of instruments, and for the purchase of chemicals in the department of physics and chemistry.....	2, 000 00	
For the purchase of gas and steam machinery, steam-pipe and fixtures, rent of buildings for use of the academy, freight, cartage, water, music, musical and astronomical instruments, uniforms for bandsmen, telegraphing, and for the current expenses and repairs of all kinds, and for incidental labor and expenses not applicable to any other appropriation.....	33, 450 00	
For stores in the department of steam-enginery.....	800 00	
For materials for repairs in steam-machinery.....	1, 000 00	
	46, 600 00	46, 600 00
NOTE.—(See recapitulation.)—The excess in the amount asked for the fiscal year ending June 30, 1876, over the amount appropriated for the fiscal year ending June 30, 1875, is occasioned by the reduction made by Congress of \$17,750 in the estimate submitted under this head and the appropriation made for the year ending June 30, 1875.		
RECAPITULATION.		
Pay of professors and others.....	59, 126 00	59, 826 00
Pay of watchmen and others.....	28, 469 50	30, 659 00
Pay of mechanics and others.....	17, 461 90	17, 461 90
Pay in department of steam-enginery.....	8, 760 00	8, 760 00
Repairs and improvements.....	14, 000 00	14, 000 00
Heating and lighting.....	15, 000 00	
Contingent expenses.....	46, 600 00	46, 600 00
	189, 417 40	176, 306 90
Excess.....	13, 110 50	

Respectfully submitted.

UNITED STATES NAVAL ACADEMY.  
Annapolis, Md., September 1, 1874.JOHN L. WORDEN,  
Rear-Admiral and Superintendent Naval Academy.

No. 3.

## BUREAU OF EQUIPMENT AND RECRUITING.

NAVY DEPARTMENT,  
BUREAU OF EQUIPMENT AND RECRUITING,  
*Washington, October 27, 1874.*

SIR: I have the honor to submit herewith the annual operations of this Bureau, together with the estimates for the fiscal year ending 30th June, 1876.

During the past fiscal year one hundred and three vessels have been either partially or wholly equipped under this Bureau at the several navy-yards, at an expenditure of labor and of material, part of which was on hand and part purchased, of \$1,559,549.67.

Fifty-nine thousand six hundred and sixty-five tons of coal have been purchased, costing, including freight, labor, &c., \$624,512.

Two hundred tons of hemp have been purchased, costing \$63,647.97, and four hundred and ninety-nine tons of hemp have been manufactured into rope.

The rope-walk at the Charlestown navy-yard has supplied the wants of the service with wire, hemp, and manila rope.

The equipment-shops at the Washington navy-yard have supplied all the wants of the service for anchors, chains, galleys, &c.

The naval rendezvous were closed on the 3d January last, except at Mare Island, and were only opened again for the enlistment of a crew for the Plymouth, and to fill vacancies in the North Atlantic and Pacific squadrons. They are closed at present.

The former recommendations of the Bureau, as to furnishing enlisted men with an outfit on entering the service, and as to apprehending deserters after the time of their enlistment has expired, and causing them to serve out their lost time, as is the case in the Army, are respectfully renewed.

The Bureau has placed its estimates for 1875-'76 at the amounts heretofore appropriated for the last five years, as it is evident that the reduction made in the appropriations for the current year, if continued, will leave the Bureau with insufficient funds to carry on its operations.

I have the honor to be, very respectfully, your obedient servant,  
WM. REYNOLDS,  
*Chief of Bureau.*

Hon. GEO. M. ROBESON,  
*Secretary of the Navy.*

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1876,  
by the Bureau of Equipment and Recruiting.*

Detailed objects of expenditure and explanations.	Estimated amount which will be re- quired for each detailed object of expenditure.	Amount appropri- ated for the cur- rent fiscal year ending June 30, 1875.
<b>SALARIES.</b>		
Chief clerk, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3) .....	\$1,800 00	.....
One clerk of class four, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8) ..	1,800 00	.....
One clerk of class three, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8) ..	1,600 00	.....
Two clerks of class two, per act of July 12, 1870, (16 Stat. at L., p. 248, sec. 1) ..	2,800 00	.....
Two clerks of class one, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8) ..	2,400 00	.....
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	840 00	.....
One laborer, per act of July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	720 00	.....
	<u>11,960 00</u>	<u>\$11,960 00</u>
<b>CONTINGENT EXPENSES.</b>		
Stationery, books, and miscellaneous items, per act of June 20, 1874 .....	850 00	850 00
<b>PAY OF THE NAVY.</b>		
For pay of commissioned and warrant officers at sea, on shore, on special service, and of those on the retired list and unemployed, and for the pay of the petty officers, seamen, ordinary seamen, landsmen, and boys, in- cluding men of the Engineer's force, and for the Coast-Survey service, 8,500 men, at an average pay of \$300 per annum, per act of July 15, 1870, (16 Stat. at L., p. 330, secs. 3-17) .....	6,500,000 00	6,250,000 00
<b>TRAVELING EXPENSES OF OFFICERS.</b>		
For the actual expenses of officers traveling under orders, per act of June 16, 1874, proviso relating to traveling expenses .....	300,000 00	.....
<b>EQUIPMENT OF VESSELS.</b>		
Coal for steamers' and ships' use, including expenses of transportation, stor- age, and labor, hemp, wire, hides, and other materials for the manufac- ture of rope, cordage, canvas, leather and wood, iron for the manufacture of cables, anchors, and galleys, furniture, hose, bake-ovens, cooking and heating stoves, life-rafts for monitors, tools, condensing and boat detach- ing apparatuses, heating apparatus for receiving-ships, and for the pay- ment of labor in equipping vessels, and manufacture of articles in the several navy-yards .....	1,500,000 00	1,065,000 00
<b>CONTINGENT.</b>		
Expenses of recruiting, freight, and transportation of stores, transportation of enlisted men, printing, advertising, telegraphing, books and models, stationery, express charges, internal alterations, fixtures and appliances in equipment buildings at navy-yards, foreign postage, ferriage and car- tickets, ice, apprehension of deserters, assistance to vessels in distress, and good-conduct badges for enlisted men .....	125,000 00	75,000 00
<b>CIVIL ESTABLISHMENT AT NAVY-YARDS.</b>		
At the navy-yard, Kittery, Me.:		
Chief and time clerk .....	\$1,250 00	
Store-clerk .....	1,100 00	
	<u>2,350 00</u>	.....
At the navy-yard, Charlestown, Mass.:		
Chief and time clerk .....	1,400 00	
Store-clerk .....	1,250 00	
Superintendent of rope-walk .....	1,900 00	
	<u>4,550 00</u>	.....
At the navy-yard, New York, N. Y.:		
Chief and time clerk .....	1,400 00	
Store-clerk .....	1,200 00	
	<u>2,600 00</u>	.....
At the navy-yard, Philadelphia, Pa.:		
Chief and time clerk .....	1,400 00	
Store-clerk .....	1,250 00	
	<u>2,650 00</u>	.....

*Estimates of appropriations required for the service of the fiscal year, &c.—Continued.*

Detailed objects of expenditure and explanations.	Estimated amount	Amount appropriated for the current fiscal year ending June 30, 1875.
At the navy-yard, Washington, D. C.:		
Chief and time clerk .....	\$1,250 00	
Store-clerk .....	1,100 00	
		\$2,350 00
At the navy-yard, Norfolk, Va.:		
Chief and time clerk .....	1,250 00	
Store-clerk .....	1,100 00	
		2,350 00
At the navy-yard, Pensacola, Fla.		
Chief and time clerk .....		1,000 00
At the navy-yard, Mare Island, Cal.:		
Chief and time clerk .....	1,839 00	\$19,689 00
PUBLIC PRINTING.		
For printing and binding .....		6,000 00

BUREAU OF EQUIPMENT AND RECRUITING,  
September 1, 1874.

WILLIAM REYNOLDS,  
Chief of Bureau.

#### No. 4.

### BUREAU OF NAVIGATION.

NAVY DEPARTMENT, BUREAU OF NAVIGATION,  
October 25, 1874.

SIR: I have the honor to submit the following report of the Bureau of Navigation for the past year, together with estimates for its support, and for the expenditures that will probably be required in that division of the naval service committed to its immediate charge, for the fiscal year ending June 30, 1876. Included in this report, and transmitted herewith, are the reports and estimates of the several offices under its cognizance.

#### NAVIGATION.

It will be seen in the report of the superintendent of compasses that the recent improvements in the navy liquid compass, tested and stimulated by the system of compass inspection inaugurated during the past year, promise to leave little to be desired as to the future usefulness of this important instrument. The Bureau is so well satisfied of the superiority of these compasses, in accuracy and usefulness, over every form of dry compass, that the proper steps have already been taken to dispose of the stock of dry compasses formerly in use, retaining a few only at each naval station to meet any special emergency that may arise, like that of a deficient supply of the liquid compasses at a particular juncture.

Improved metallic biunacles are being substituted for those now in use.

The compass-stations in the vicinity of several of our navy-yards, employed for some time past in forming deviation-tables, by "swinging ship" before proceeding to sea, are believed to be of comparatively

little practical utility ; partly from too close proximity in general of the objects available for the method of long distance observations, and partly from their inconvenient use in some cases with any considerable sea.

More recent experience has demonstrated that the necessary observations for tables of compass deviations may be more conveniently as well as more accurately made in the immediate vicinity of the ordinary mooring-places of our ships of war by the methods of reciprocal bearings and celestial azimuths, and even after getting to sea with greater general accuracy and less labor by the latter method. It is deemed inexpedient to keep up these stations, mostly at considerable expense, with the exception of those in Hampton Roads and near Mare Island. That in the Delaware River has long since been abandoned, on account of the very serious difficulty in maintaining the buoys against the running ice of the winter. At the other stations it is proposed to retain only the center buoy for any special occasion that it may be found expedient to resort to them. Practical instructions for this class of observations, prepared by Professor Greene, and now in press, will soon be issued, giving full details in relation to the different methods that may be advantageously employed ; and the general consideration of this subject, including that of the magnetism of ships, it is expected will soon follow.

#### HYDROGRAPHY.

Your attention is invited to the report of the hydrographer and a favorable consideration of the estimates submitted for hydrographic work. The charts already published or in progress, the data collated, and the partial surveys and examinations of danger, suggested in general by the hydrographer, are of great utility to our commerce and to that of other nations.

It is almost superfluous to say that expenditures considerable in amount are necessary to begin extensive surveys, and that continued appropriations are required to keep them in progress. The want of them has made it necessary for the Department to turn over the Portsmouth to strictly naval duty. It is respectfully suggested that the purchase and outfit of two schooners, to act in concert with the Narragansett, will do much to increase results in the continued survey of the North Pacific Ocean. The advantage of several vessels co-operating on a running or ordinary survey, is well known and appreciated by all surveyors, affording as they do points for making observations upon, and making the aggregate results far greater than can be obtained by the vessels acting singly.

The Fortune, already fitted for the work, is ready to leave to make partial surveys in the West Indies, and during the past year has completed a running-survey of the eastern coast of Mexico from Yucatan to the Coatzacoalcas, and off-shore soundings to the mouth of the Rio Grande, our boundary-line.

The Wasp has been usefully employed surveying in the mouth of the Rio de la Plata, and other naval vessels have performed similar service in various parts of the world.

The proceeds from sales of charts and sailing-directions published by the Hydrographic Office, revert to the Treasury under the law, making to some extent the appropriations asked for rather nominal than real. The more they supply the public want, the less they will cost the country, although apparently the reverse.

The deep-sea soundings of the Tuscarora, as directed to be made by the Department, are now completed. Acting under instructions, this

Bureau made the necessary provisions for sounding with steel wire, and in the event of failing with it, for sounding with hemp-line. Aided by the advice and assistance of Sir Wm. Thomson, of Glasgow, a fair commencement with wire was obtained. The attention and ability of Commander Belknap made the work entirely successful, through such modifications of the appliances as were found to be necessary. These modifications are detailed in his reports.

The advantages of steel wire over hemp-line in deep-sea soundings are as follows: The small amount of weight and space required for the apparatus; the large relative weight of the sinker, as compared with the line employed; the very little surface-friction of wire in its descent, as compared with hemp-line; the fact that miles of wire have very little "stretch" on ordinary tension, and hemp-line a great deal, making the indications of a dynamometer comparatively uncertain with hemp-line; as consequences, the relative rapidity of descent and recovery of the wire with small labor; the ease with which wire is preserved from deterioration, as compared with hemp-line, and its small cost, combined with the unerring certainty of result.

These advantages enable a vessel-of-war to carry a sounding-apparatus without interfering in any degree with her other purposes, and to sound at such times as may be desired, or as required by instructions.

This Bureau has now nine sets of apparatus available, which will be employed as the Department may direct.

The results of the recent soundings in the Pacific Ocean are very gratifying. They have demonstrated that, with an apparatus having a dynamometer to indicate the moment of striking bottom; with steel-wire, and properly constructed specimen, and sinker-detaching appliances, the problem of measuring the exact depths of the great oceans, and bringing up parts of the soil from their beds, may now be regarded as solved.

All bottom-specimens collected during the sounding-cruise of the *Tascara* have been turned over to the Smithsonian Institution for microscopic examination.

The interoceanic surveys of the Isthmus of Darien, and south up the Atrato to the Napipi and Doguado Rivers, and in Nicaragua, have been satisfactorily carried out. As you were pleased to assign them in part for instructions to this Bureau, it becomes its duty to report its high appreciation of the difficulties attending the surveys, especially of the Napipi route, and the satisfactory manner in which all engaged performed their duties. The able reports require only to be read to settle the great question of the feasibility of the construction of an interoceanic ship-canal, regarded wholly in a commercial point of view.

#### NAVAL OBSERVATORY.

The report of the Superintendent of the Naval Observatory gives the work in progress, and especially the preparations made to secure extended observations of the transit of Venus. It is believed that they have been ample, and that, with favorable weather for observations, the results will be entirely satisfactory.

The great equatorial telescope is now completed, and proves to be all that could be expected.

I commend to your favorable consideration the estimates for the next fiscal year, submitted by the superintendent.

#### NAUTICAL ALMANAC.

The Superintendent of the Nautical Almanac presents in detail the work completed and in progress under his charge, with the usual esti-



mates for its continuance, to whose report I respectfully invite your attention.

Like those of the Naval Observatory, the publications of this Office are supplied to other Departments of the Government, and to the higher institutions of learning throughout the country, without charge, while supplying to the commercial marine, as well as to the Navy, what would otherwise be required to be procured by purchase at considerable cost from the agents of foreign governments.

The proceeds of sales of the Nautical Almanac revert to the Treasury; the appropriations made annually for its preparation and publication are therefore in part nominal, but necessary to the continued publication of the work in advance, without which it fails in its object.

#### NAVY-SIGNALS.

It is respectfully recommended that cadet-midshipmen be required, as a primary condition in passing a final examination, to be properly versed in signaling by the Army-signal method. This Bureau has to regret the frequent neglect on board of our vessels-of-war of this important instruction. If not insisted upon as of marked importance, it will die out through neglect.

A tactical signal-book, based upon the tactics of Commodore Foxhall A. Parker, of our Navy, is now issued. It has the advantage of being masked effectively, and in a very simple manner, when required; but it is not thought advisable during peace to inform commanding officers of the manner of execution.

The publication of an American edition of the International Signal Code by this Bureau, has done much toward bringing it into general use, and doubtless with great prospective value to ourselves and to the merchant-marine of other powers.

The chronosemic method of signaling has been experimented upon, but it is believed has not fully developed its usefulness from defect of the appliances.

The electric light bids fair to be of sufficient use to demand its trial; to that end one has been obtained, and, if found advisable, electric lights will be supplied to our vessels-of-war, as the appropriations will warrant.

The side-lights of steamers and sailing-vessels, in common with those of vessels of other nations, are defective; they throw out the rays of light at right angles to the axis of elevation of the lantern, and the axis is not maintained in a perpendicular position which is necessary to throw the rays of light horizontally, without which a plate of glass is supposed preferable to the serrated surfaces, so formed to refract the rays of light at right angles to the axis of elevation of the lantern.

An investigation of this subject is now in progress.

Respectfully submitted.

DAN'L AMMEN,  
*Chief of Bureau.*

Hon. GEO. M. ROBESON,  
*Secretary of the Navy.*

OFFICE OF THE SUPERINTENDENT OF COMPASSES,  
BUREAU OF NAVIGATION, NAVY DEPARTMENT,  
Washington, October 31, 1874.

SIR: In conformity to your general instructions of March 28, 1873, I have the honor to submit the following statement of matters pertaining to the line of duty assigned to me.



## THE NAVY COMPASS.

Besides the several improvements in the Navy compass referred to in my report of the preceding year, the compass-card has been further improved by a provision for the mechanical adjustment of the cap, by which means the center of suspension is more readily brought into close coincidence with the center of the card-circle, while it more easily admits of subsequent readjustment whenever required. With the gain in precision afforded by the foregoing provision it has been made apparent that it might be advisable to make some change in the forms of the cap and pivot, in order to secure a better definition of their point of contact.

It has been deemed advantageous to insure increased rigidity in the bowl-circle, in view of its fundamental relations to the construction and adjustments of the card and pivot, and of its subsequent use as the seat of the interchangeable azimuth-circle. To this end, not only has the rim itself been strengthened, but the bowl has been made heavier and more unyielding by casting it in bronze instead of swaging it as heretofore from a rolled sheet. In addition, a further improvement of the bowl has been accomplished in the better formation of the *lubber-line*. This, as formerly painted upon the surface of the bowl, was liable to certain imperfections in direction and equality of width, besides being unnecessarily wide in some cases. It is now formed upon a white enameled plate, which is carefully set in a groove upon the surface of the bowl.

An inspection of all the liquid-compasses in the navigation-stores at the several navy-yards upon the Atlantic coast was made during the spring, the results of which were reported to the Bureau. The greater proportion of the compasses in store consisted of the earlier forms of construction, which, besides being obsolete, were in some cases in bad condition from previous service. Under the authority of the Bureau all these compasses are being put in serviceable condition, while all the 7½-inch compasses, or those of regulation size, are being completely overhauled and fitted with new cards and bowl-circles, so as to be in all respects as good as those recently furnished by the makers.

## INSPECTION OF COMPASSES.

The practical utility of the compass-observatory, whose establishment was referred to in a preceding report, would appear to have been fully justified by the results of compass-inspection during the past year. Not only have we been able to arrive at a definite understanding of the actual condition of our compasses, as received from the makers, by ascertaining their fitness and detecting inadmissible defects, but it has proved a valuable school of practice in teaching the makers as well as the inspector where to look for defects in construction and adjustment, and the possibilities of improvement. It is, perhaps, too soon to pronounce an opinion as to the limits of admissible error in the adjustments of the Navy compass, but we are warranted, I think, from the results already obtained, in the opinion that the Navy regulation-compass may be supplied to the service in a condition that shall be practically perfect, so far as sensibility and the errors of adjustment are concerned. Its sensibility is now practically perfect; and this important condition of the compass is so evident a consequence of its peculiar construction, that a defect in this particular in any individual compass must be regarded as abnormal, and its cause to be looked for in some special imperfection

of workmanship in the cap or pivot. Nor is this all; but the peculiarities of construction, upon which this compass depends for its sensibility, when supplied by the makers, are alike favorable to its continuance during a long period of service under ordinary circumstances of experience at sea. Since the first inspection at the observatory, in December last, there has been a distinctly recognizable progress in improvement of the compass-adjustments; and I beg to record in this place my cordial appreciation of the maker's hearty co-operation in carrying forward every practicable improvement, alike whether suggested by me or originating with themselves, and even when involving a pecuniary outlay which could have no apparent or immediate return.

#### MAGNETISM OF SHIPS.

On the 25th and 26th of June last, I made a series of observations at the Boston navy-yard, on board the United States steamer *Intrepid*, the new torpedo-ship, then fitting for her first trial-trip. This vessel, after being launched and hauled into dock, had remained with her head not sensibly different from what it had been while she was on the stocks, up to the time of these observations, with the exception of a few days, during which period she had been moored alongside the quay with her head about eight points to the eastward of her original or general heading.

The ship has an iron hull, frames, deck-beams, deck, and bulk-heads.

Four stations on board, all in the fore-and-aft section, were selected for observation, comprising one on the poop-deck; one amidships on the deck; one in the pilot-house, a few feet forward of the smoke-funnel, and one forward of the pilot-house, on the deck.

The results of these observations revealed large differences in the deviations of the several compasses, especially of those at the aft and fore stations. Thus, while the maximum deviations at the former hardly exceeded eight degrees, or three-fourths of a point, they were not less than about seven points at the latter station. Even in the pilot-house, the maximum deviations were about four points. The directive force, as was to be expected, varied but little upon the different headings at the aft station; but its changes at the fore station were not less extreme than those of the deviations at this station. It was impracticable to observe for the directive force at the station in the pilot-house.

The pilot-house of the *Intrepid* is built upon the main deck, a little forward of the smoke-funnel, its lower half consisting of a massive vertical cylinder of iron, while its upper part, including its conical roof, is built of wood. The wheel is placed in the center, a little below the top edge of the iron portion of this structure, and the steering-compass was intended to be placed in its fore segment. I made no examination of the magnetic conditions of this position for the steering-compass, as it was sufficiently probable, not only that the deviations would be large, but that the directive force would be so greatly reduced on every course as to render a compass, however good in itself, practically useless. Accordingly, for the purposes of these observations, I had suspended a hanging or tell-tale-compass under the roof, as high above and as nearly symmetrical with the iron base as was practicable for convenient observation from the helmsman's place at the wheel.

The following conclusions were deduced from the observations on the *Intrepid*:

First. That the poop furnished a good position for the standard compass of this ship; the deviations being sufficiently moderate to cause no inconvenience in reading or correcting the compass.

Secondly. That the steering-compass, in order to be placed in the pilot-house at all, should be suspended over the wheel, in the form of a hanging or tell-tale compass, instead of being set up in a binnacle, as originally intended, forward of the wheel.

Thirdly. As it would be inexpedient at present to reduce the deviations and equalize the directive force by magnetic adjustments at the steering-compass, in view of the considerable changes which are likely to occur in the magnetism of this ship during her first experience at sea, it will be necessary and sufficient to steer her on any course set by the standard compass, by simply directing the helmsman to keep her upon the corresponding course, by comparison, of the steering-compass.

On the 21st and 22d of this month I visited the ship-yards at Wilmington, Del., and Chester, Pa., for the purpose of making preliminary observations with reference to the magnetic characteristics of the three iron sloops-of-war now being built at those places for the Government.

The ship at Wilmington was still on the stocks; while the two at Chester had been launched, but hauled alongside docks, in one case exactly, and in the other case only five degrees different from the position which it had on the stocks. The hulls and decks were complete, but no machinery, boilers, or smoke-funnel had been placed in either of the ships.\*

I determined the true heading, as well as that by compass, of each ship; made observations for deviation aft and forward in each case; as also observations for horizontal or directive force, and for vertical force at the same stations on board each ship. With these data we shall be able to determine, not only approximately the present magnetic characteristics of these ships, but to appreciate the changes introduced by setting up the machinery, boilers, funnels, and other iron-work upon the decks, with the aid of subsequent observations, after the vessels are completed.

I am, sir, very respectfully, your obedient servant,

B. F. GREENE,

*Prof. Math., U. S. Navy, Superintendent of Compasses.*

Commodore DANIEL AMMEN, U. S. N.,

*Chief of Bureau of Navigation, Navy Department.*

HYDROGRAPHIC OFFICE,

*Washington, August 4, 1874.*

SIR: I have the honor to submit, as directed by the Bureau, the estimates of this Office for the fiscal year ending June 30, 1876.

During the past fiscal year the work which has been accomplished by this Office is as follows:

Ten charts have been prepared and engraved; seven are in process of engraving; two ready for engraving; eight preparing for the engraver, and ten plates have been extensively corrected. One hundred and sixteen charts have been prepared and photolithographed. Sailing-Directions of the West Coast of Africa, vol. 1, of the Cape de Verde Islands, Notes on the Patagonian Channels and the Straits of Magellan; the Fourth Supplement of Papers on the Northern and Eastern Extension of the Gulf Stream, and the Foreign Light-Lists for 1874, have been completed and issued, as also the Hydrographic Notices and Notices to Mar-

\*The ship at Wilmington was open at various parts of the hull for convenience of access; thus wanting in perfect continuity.

iners, as information was received, together with several papers on subjects pertaining to hydrography.

A new meteorological journal has been prepared and issued for the purpose of collecting information for the correction and continuance of the wind and current charts.

Directions for the navigation of the northwest coast of Spain and the coast of Portugal, for Madeira, the Salvages and the Canary Islands, and for the Azores have been completed, and for some months have been in the hands of the Congressional Printer.

During the year, 1,338 books of navigation, sailing directions, &c., and 6,770 charts have been sold to the agents of this Office, besides the supply issued to vessels of the Navy.

The survey in the Pacific Ocean, by Commander Dewey, United States Navy, and the officers of the United States steamer Narragansett, has nearly completed its work on the coasts of the peninsula and in the Gulf of California and the Revilla Gigedo group of islands. This survey has been prosecuted most satisfactorily, and the charts are now in preparation for publication. But little additional work is to be done in the Gulf of California, then, as directed by the Bureau, the vessel would have been employed on the survey of the dangers existing and reported in the Pacific Ocean, and in surveying localities not yet surveyed or only partially surveyed.

It is much to be regretted that this work, so necessary to the safety of commerce, has been delayed owing to the failure of the appropriation asked for its continuance.

An excellent survey of Palmyra, Washington, and Christmas Islands, in the North Pacific Ocean, has been made by Commander Skerrett, United States Navy, and the officers of the United States steamer Portsmouth, the charts of which have been completed and issued.

The running survey of the Gulf coast of Mexico, commenced and carried from the Rio Grande to Vera Cruz, by Commander Baker and officers of the United States steamer Wyoming, has been carried to Laguna de Terminos and completed by Lieut. Commander F. M. Green, and the officers of the United States steamer Fortune. The charts from this survey are being prepared for publication.

Surveys of doubtful points and positions have been made by order of the Bureau under the direction of the commanders-in-chief of squadrons, as vessels could be spared for such service. The results received at this office have been from Commander Howison, United States Navy, commanding United States steamer Shawmut, Commander A. V. Reed, United States Navy, commanding United States Steamer Kansas, and Commander Mahan, commanding United States steamer Wasp.

I would again respectfully call the attention of the Bureau to the necessity of enlarged accommodations for this Office, and to the risk which is incurred by the building now occupied being neither fire-proof nor having any fire-proof attachment.

I have also submitted the estimate for continuing the Pacific survey, as appropriated for in the year ending June 30, 1874, and an estimate for engraving a Great Circle and Wind and Current Chart of the North Atlantic Ocean on a gnomonic projection.

Very respectfully, your obedient servant,

R. H. WYMAN,

*Commodore U. S. Navy and Hydrographer.*

Commodore DANIEL AMMEN,

*Chief of Bureau of Navigation.*

UNITED STATES NAVAL OBSERVATORY,  
Washington, October 17, 1874.

SIR: I have the honor to submit the following report of the observatory for the current year:

## ASTRONOMICAL WORK.

*The great equatorial.*—Shortly after the date of the last annual report the 26-inch equatorial, ordered from Alvan Clark & Sons, in 1870, was received and successfully mounted. Its performance has been, on the whole, eminently satisfactory, the defects being principally such as seem necessarily incident to so large an instrument, or such as are to be expected in a construction now tried for the first time. A want of exact achromatism is a defect in all refracting telescopes, which there is no known method of obviating, and which increases with the size of the glass. The effect of changes of temperature on the glass is something quite marked, but becomes troublesome only when after a comparatively warm day the glass is first exposed to the cool air of evening. Observations may then be interfered with for half an hour or longer.

The diurnal movement of the telescope, necessary to make it follow an object, has hitherto been given by means of a small water-wheel in the cellar, which has proved much too powerful for the delicate regulating-apparatus. Alterations to remedy this are about being made by the contractors.

The most important work of this instrument has been micrometric measures of the satellites of Saturn, Uranus, and Neptune.

The satellites of the two latter, which are among the most difficult objects in the heavens, have been observed with an accuracy never before approached, and these observations will lead to a more certain determination of the masses of the respective planets. Work has also been commenced on a list of the closest and most difficult double-stars. Professor Newcomb, with Professor Holden as assistant, has been in charge of this instrument, since its mounting.

The work of the old equatorial has been temporarily suspended in consequence of the absence of Professor Hall to observe the transit of Venus. It is still used for the observations of occultations in connection with the observers of the transit of Venus.

*The transit circle.*—Until May 29, 1874, this instrument was in charge of Prof. Wm. Harkness, assisted by Prof. J. R. Eastman, Prof. E. S. Holden, and assistants Edgar Frisby and Ormond Stone. Prof. E. S. Holden was detached, November 17, 1873, and assistant A. N. Skinner was assigned to duty on this instrument on the same day. On June 1, Prof. J. R. Eastman was placed in charge of the transit circle, with Messrs. Frisby, Skinner, and Stone, assistants.

This instrument has been employed in observations of the sun, moon, and planets, and of a large list of miscellaneous stars whose places were required, 1st, for the reduction of observations made with the equatorial; 2d, as zero points for the formation of a catalogue from the zone observations made here in the years 1846 to 1849; 3d, for the use of Lieut. G. M. Wheeler, of the United States Engineers, on the reduction of the zenith telescope work of his parties engaged in surveying and exploring the Western Territories.

Observations of "Nautical Almanac" stars have been mostly limited to those necessary for the determination of time and azimuth. Several observations of Ooggia's comet were made in July.

The volume of observations for 1872 is daily expected from the press,



and a portion of the transit-circle work for 1873 will be in the hands of the printer by the 25th instant.

During the winter, two series of clock-signals were exchanged with parties of coast-survey observers, to determine the longitude of Key West, and Savannah, Ga. The computation of this work at the observatory is nearly completed.

The transit-circle observing-room is in a very unsatisfactory condition. It is impossible to obtain proper ventilation in the hot days of mid-summer; the roof-shutters do not work well; and, in spite of frequent repairs, they leak in every heavy rain-storm; the track for the reversing carriage is not properly laid, and the arms of the reversing carriage, which are half an inch too near together, require some changes; and the protection of the thermometer, on which the computation for refraction depends, is such that there is frequently an abnormal daily range of  $5^{\circ}$  or  $6^{\circ}$ .

It will require at least \$1,500 to put this room in good order.

*The mural circle.*—Prof. M. Yarnall has been engaged in observing, with the mural circle, those stars in the general catalogue whose places were not, as he supposed, sufficiently well determined. They were, for the most part, stars observed but once with the prime vertical transit instrument, and some others, for whose more accurate determination further observations are desirable. The catalogue being thought by many astronomers to have great value, it is desirable to issue a new edition, with such additions as the number of years elapsed since its publication would give us. To this end it is necessary to observe with the mural circle for about another year, and then two years with the transit instrument will give the catalogue great completeness. As this is the only work which Professor Yarnall's years of service will enable him to complete, he desires to carry it forward with energy.

He has reduced all his observations up to date; he has also compared the catalogue with Argelander, Weisse, and other catalogues, and endeavored to root out all the errors, clerical or others, which could be found; he has read the proofs for the volume for 1872, which is daily expected from the press, and has prepared the work of 1873, which is almost entirely ready for printing.

In all his labors he has had the assistance of Professor Lockwood, which has been to him of great value; he has checked all his computations and thereby rendered them of more value, besides copying the work and preparing it for the press.

*Theory and tables of the Moon.*—This work, which has been interrupted for more than a year by the construction of the great telescope and the preparations to observe the transit of Venus, has been recommenced by Professor Newcomb.

A renewal of the small appropriation for computations is therefore asked for, which it is expected will suffice to prepare the first and second parts of the work for publication.

*Transit of Venus.*—The commission authorized by section 1 of the act of Congress approved March 3, 1871, entitled "An act making appropriations for the naval service for the year ending June 30, 1872, and for other purposes," and by section 1, of the act approved June 10, 1872, entitled "An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1873, and for other purposes," to expend appropriations for the transit of Venus, held its first meeting on the 22d of July, 1872, when it was duly organized.

Under the specific action and direction of this commission, from time to time the requisite instruments have been selected and made; the

parties have been constituted, the stations adopted, and the work of preparation and instruction has been carefully matured and strictly executed.

At the meeting of the 9th of February, 1874, it was decided to invite Dr. Henry Draper, of New York, to take charge of the work of putting into successful execution the various operations necessary for photographing the transit of Venus by the methods decided upon by the commission, and of instructing the parties in those operations. Dr. Draper accepted this arduous duty, and performed it in a manner which commands the gratitude and respect of the commission. Dr. Draper declined to receive any compensation or re-imbursement for his invaluable services and for his unavoidable personal expenses while traveling and residing in Washington, on the service of the commission.

The system of practice was fully carried out, and the several parties destined for the observation of the transit of Venus in both hemispheres, left the United States fully qualified in all respects to perform their duties.

Instructions for conducting the scientific operations of the parties were prepared by Professor Newcomb, printed, and freely distributed.

*Meteorological Department.*—This department has been in charge of Professor Eastman; and the usual observations with the barometer, and the dry, wet, and solar thermometers have been made at 0<sup>h</sup>, 3<sup>h</sup>, 6<sup>h</sup>, 7<sup>h</sup>, 9<sup>h</sup>, noon; 3<sup>h</sup>, 6<sup>h</sup>, 9<sup>h</sup>, on each day.

The observations in 1872 have been printed only in the large annual volume; but, in order to accommodate our large number of meteorological exchanges, the observations of 1873 have already been printed, and 200 extra copies obtained to supply immediately the wants of our meteorological correspondents. These extra copies of the meteorological work will enable the Observatory to save the expense of an equal number of annual volumes in exchanging with those who furnish us only with meteorological data, and who are not interested in the bulky volume of astronomical data which has hitherto been furnished them.

*Chronometers.*—There are at present 43 chronometers under comparison, of which 25 are ready for issue; the remainder are under trial. Twenty-one have been sent to Messrs. Negus for repairs, and 8 others are awaiting an opportunity to be sent for that purpose. Sixty-eight have been received from Messrs. Negus, repaired and cleaned. During the year, 87 have been received from all sources, and 64 issued for use. The latter number includes 8 break-circuit sidereal and 28 mean-time chronometers issued to the different parties sent out to observe the transit of Venus. Twenty have been condemned and withdrawn from service by order of the Bureau, 4 of which were for irregularity of performance, and 16 for age.

Messrs. Negus, of New York, have for the past year done the repairing of such chronometers as have needed it, and have at the present 29 box, and 2 pocket, chronometers, undergoing repairs, together with 19 watches sent to them for repairs by order of the Bureau. The officers at present in charge of these are Commander A. T. Snell, from the 13th instant; Lieut. Comd'r C. H. Pendleton, from December 8, 1873, and Lieut. C. H. Arnold, from April 13, 1874. Capt. A. W. Johnson was detached June 22; Lieut. Comd'r S. W. Terry, July 10, and Lieut. L. G. Palmer, August 15.

During the absence of Mr. W. F. Gardner, instrument-maker, who is attached to Professor Hall's party to observe the transit of Venus, such of his duties as pertain to chronometers and batteries have devolved upon his assistant, Mr. George Anderson.



The routine duties connected with the care of chronometers have been fully described by Capt. A. W. Johnson in his report of 1873.

*The library.*—During the year there have been added to the library 203 volumes on the subjects of Astronomy, Magnetism, Meteorology, Geodesy, Mathematics, and others more or less directly related to the purposes of the Observatory, besides a much larger number of pamphlets presented by learned societies, or their respective authors. Much the larger proportion of all these has accrued to the library, as heretofore, by the exchange of its own publications, which are thus building up a collection promising to excel in its scientific character most if not all found elsewhere in this country. These exchanges are maintained by the prompt distribution, at home and abroad, chiefly of the annual volume of our Astronomical and Meteorological Observations. In the distributions of the volume for 1871, received on the 8th of January last, the Observatory has been again placed under obligations to the Resident Legations of foreign countries, to our Department of State, and largely to the Smithsonian Institution.

*Proposed erection of quarters for observers.*—One of the most serious wants of this establishment is that of quarters for the observers. At the present time, in order to keep up observations with all due regularity, the officer is obliged to leave his bed at any and all hours of the night, and walk a distance ranging between half a mile and two miles, much of the way through a thinly-settled portion of the city. Few can continue this exhausting practice for any considerable length of time. The difficulty of procuring near the Observatory a residence which is at the same time cheap, healthful, and decent, is such that only two of the nine observers reside within a mile of it, while two reside at a distance of two miles. There is, moreover, no street-railroad within half a mile. I know of no Observatory in the world so difficult of access, in which quarters for the observers are not supplied, and I am persuaded that there is none such.

It is proposed to commence with quarters for the officers in charge of the great telescope and the meridian observations, which will supply the principal want in question. If best to begin with a single house, then one for the officer in charge of the great telescope, should be first built.

I have the honor to be, very respectfully, your obedient servant,  
C. H. DAVIS,

*Rear-Admiral, Superintendent.*

Commodore DANIEL AMMEN, U. S. N.,  
*Chief of Bureau of Navigation, Navy Department.*

---

NAUTICAL-ALMANAC OFFICE,  
Washington, D. C., October 23, 1874.

SIR: I have the honor to submit the following report of the operations of this Office during the past year:

The preparation of the American Ephemeris and Nautical Almanac has continued as in previous years. The Ephemeris for each year comprises all relating to the places of the sun, moon, principal planets, and standard stars, that is desired by astronomers in such a work. During the past year nearly 340 copies have been sold, and 750 have been distributed to the ships and stations of the Navy; to the surveying and exploring parties of the Army, the Coast Survey, and the Land-Office; to observatories and astronomers, and to various colleges and other

public institutions, especially to those in which astronomical observations or investigations are conducted.

A smaller volume, containing the first half of the complete Ephemeris, is published for the use of navigators. More than 4,000 copies of the Almanac for each year are required for the supply of merchant-ships.

There have been printed during the year 200 copies of the Ephemeris for 1874; 700 of the Ephemeris for 1875; 500 of the Ephemeris for 1877; 300 of the small Almanac for 1874; 3,300 of the small Almanac for 1875; 1,000 of the small Almanac for 1877; 200 of the Star Tables of the American Ephemeris; 300 of tables of logarithms of sines and cosines, with the argument in time, and 200 of tables for finding the latitude of a place by altitudes of Polaris. The last two are small pamphlets of a few pages, extracted from the Ephemeris for 1877.

The small Almanac for 1877 was received from the printer in April, and the complete volume for 1877 in August of the present year.

The greater part of the Ephemeris for 1878 has been prepared, and it is expected that the entire volume will be completed before next April. The ephemeris of the sun and a part of that of the moon, for 1879, have also been prepared.

Arrangements have been made for the computation of ephemerides of twenty-six of the forty-one small planets discovered by American astronomers. But the appropriation of only \$2,000 in the present fiscal year will compel the omission of some of them. Four thousand dollars are required each year to take up all of this class of work, which should be done in this country; and it is hoped that this sum will be appropriated for that purpose in the next fiscal year. I have already submitted estimates for that year.

I am, very respectfully, your obedient servant,

J. H. C. COFFIN,

*Professor of Mathematics, U. S. N., Superintendent.*

Commodore DANIEL AMMEN, U. S. N.,

*Chief of Bureau of Navigation, Navy Department.*

---

UNITED STATES NAVAL SIGNAL-OFFICE,  
*Annapolis, Md., October 23, 1874.*

SIR. I have the honor to submit the following report of the operations of this Office during the past year:

In November and December, 1873, a series of experiments in night-signaling was made with the Murphy flash and signal lantern, and Coston's improved signal-lights, the Larrabee cipher code examined and modified, and a naval tactical signal-book prepared, which was approved for and issued by the Navy Department in January of the present year, and used by Rear-Admiral Case in manœuvering the united fleets under his command in Florida Bay. Having been detailed for duty, under the rear-admiral, during this period, my office was closed, and its business transferred to the Bureau.

During the months of May, June, and July various systems and methods of both day and night signaling were examined and tested, each being subjected to a thorough trial, and its merits reported upon. Among them were the systems of Ward and Coston; that of the former for both day and night work, and that of the latter for night use only.

In July an elaborate series of experiments was made with signal-bombs thrown from mortars, with which further experiments are about being made.

Since the 1st of August the Naval General Signal-Book has been undergoing a thorough revision.

During the year a careful supervision has been exercised over the signal departments of the various vessels in the service, as shown in their quarterly reports and returns, required by the circular-order of the Bureau, of July 18, 1869. These reports and returns have been regularly made, and are generally satisfactory.

Since the issue by the Bureau of Navigation of the American edition of the International Code of Signals, there has been nothing to prevent perfect communication between vessels of the Navy and of the merchant-marine, and the adoption of this code by all merchantmen should be enforced by legal enactment, if necessary.

For carrying on the operations of this Office during the ensuing fiscal year, the sum of \$1,000 will be sufficient for the various items of expense, as follows :

Office-rent .....	\$180
Laborers' wages.....	540
Contingent expenses .....	280
	<hr/>
	1,000

Very respectfully,

FOXHALL A. PARKER,  
*Commodore and Chief Signal-Officer, U. S. N.*

Commodore DANIEL AMMEN, U. S. N.,  
*Chief of Bureau of Navigation.*

BUREAU OF NAVIGATION.

*Estimate of appropriations required for the service of the fiscal year ending June 30, 1876, by the Bureau of Navigation.*

FOR THE SUPPORT OF THE BUREAU OF NAVIGATION.

For salary of chief clerk, (act approved July 5, 1862, section 3) .....	\$1,800
For salary of one clerk of third class, (act of July 23, 1866, section 8, and July 12, 1870, section 1).....	1,600
For salary of one clerk of second class, (act of July 23, 1866, section 8, and July 12, 1870, section 1).....	1,400
For salary of messenger, (act of July 5, 1862, and proviso of March 3, 1869)...	840
For salary of laborer, (act of February 25, 1863, and proviso of March 3, 1869).	720
For contingent expenses .....	800
	<hr/>
Total .....	7,160

*Estimate of appropriations required for the service of the fiscal year ending June 30, 1875, by the Bureau of Navigation.*

A.

1.—FOR NAVIGATION.

For foreign and local pilotage, and towage of ships of war.....	\$50,000
For services and materials in correcting compasses on board ship, and for adjusting and testing compasses on shore .....	3,000
For nautical and astronomical instruments, nautical books, maps, charts, and sailing directions ; and for repairs of nautical instruments for ships or war..	10,000
For books for libraries of ships of war .....	3,000

For navy signals and apparatus, namely, rockets, signal-lights and lanterns, including running-lights; and for drawing and engraving for signal-books.	\$6,000
For compass-fittings, including binnacles, tripods, and other appendages of ships' compasses .....	5,000
For logs and other appliances for measuring the ship's way, for leads and other appliances for sounding .....	5,000
For lanterns, lamps, and their appendages, for general use on board ship, including those for cabin, wardroom, steerage, holds, spirit-room, deck, and quartermaster's use .....	5,000
For bunting and other materials for flags, and for making and repairing flags of all kinds .....	5,000
For oil for ships of war, other than that used in the engineer department; for candles, when used as a substitute for oils in binnacles and running-lights; for chimneys and wicks, and for soap used in the navigation department...	20,000
For stationery for commanders and navigators of ships of war, and for use of courts-martial .....	2,000
For musical instruments and music for ships of war .....	1,000
For steering signals and indicators, and for speaking-tubes and gongs, for signal-communication on board ships of war .....	2,500
<b>Total .....</b>	<b>117,500</b>

## 2.—FOR NAVIGATION CONTINGENT.

For freight and transportation, postage and telegraphing on public business, advertising for proposals, packing-boxes, and materials, and all other contingent expenses .....	\$4,000
---	---------

## 3.—FOR NAVIGATION HYDROGRAPHIC WORK.

For drawing, engraving, printing, and photolithographing charts, correcting old plates, preparing and publishing sailing directions, and other hydrographic information .....	\$30,000
For making charts, including those of the Pacific coast .....	30,000
For fuel, lights, and office-furniture, care of building and other labor; purchase of books for library, drawing-materials, and other stationery; postage, freight, and other contingent expenses .....	5,000
For rent and repair of building .....	2,800
For continuing survey in the Pacific Ocean .....	40,000
For engraving great circle and wind and current chart of the North Atlantic Ocean .....	3,500
	<b>111,300</b>

## B.

## 1.—FOR NAVAL OBSERVATORY.

Three assistants, at \$1,500 each .....	\$4,500
For one clerk .....	1,800
For wages of one instrument-maker, three watchmen, one messenger, and one porter; keeping grounds in order and for repairs of buildings and inclosures, fuel, lights, and office-furniture, purchase of books for library and chemicals for batteries, stationery, freight, and other incidental expenses. (The usual appropriation of \$13,500 was reduced by Congress for the current year by the sum of \$3,500. The reduced sum has proved entirely inadequate for the maintenance of the observatory and preservation of buildings) .....	13,500
For continuing special investigations of the motions of the moon .....	2,000
For reducing and transcribing astronomical observations for publication .....	2,700
For reducing observations of the transit of Venus .....	3,000
	<b>27,500</b>

## C.

## 1.—NAUTICAL ALMANAC.

For pay of computers and clerk for preparing for publication the American Ephemeris and Nautical Almanac .....	\$20,000
For continuance of work on new planets discovered by American astronomers .....	3,000
For rent, fuel, labor, stationery, boxes, expresses, and miscellaneous items .....	1,500
<b>Total .....</b>	<b>24,500</b>

## RECAPITULATION.

*Estimate of appropriations required for the fiscal year ending June 30, 1876, by the Bureau of Navigation, Navy Department.*

## FOR SUPPORT OF BUREAU.

Salaries and contingent..... \$7,160

## FOR THE NAVAL SERVICE.

A. 1.—Navigation .....	117,500
2.—Navigation, contingent.....	4,000
3.—Navigation, hydrographic work.....	111,300
B. 1.—Naval Observatory.....	27,500
C. 1.—Nautical Almanac.....	24,500
Total .....	284,800

## No. 5.

## BUREAU OF YARDS AND DOCKS.

BUREAU OF YARDS AND DOCKS, NAVY DEPARTMENT,  
Washington, D. C., September 19, 1874.

SIR: I have the honor to submit the annual report of expenditures at the several navy-yards and stations under this Bureau, during the fiscal year ending 30th of June, 1874. Also estimates for improvements, repairs, general maintenance, contingent and civil establishment at the several yards and stations during the fiscal year ending June 30, 1876.

I have little to add to the statements and recommendations of my last three annual reports, so far as concerns the general condition and need of our navy-yards.

My experience in the administration of this Bureau confirms my belief as to the correctness of those recommendations.

The importance of creating a great navy-yard on the Pacific coast, sheltered by the defenses of San Francisco, and supplied by the resources of that great western city, is apparent to all, and I again urge liberal appropriations to finish its dry-dock, to continue its quay-wall, to supply it with fresh water, to add to its timber-storage, and to improve the roads, now nearly impassable in the rainy season.

On the Atlantic shore our chief naval resource in time of war would be found at New York.

At the New York navy-yard, and at the private docks, ship-yards, and machine-shops within gunshot of it, three-quarters of our fleet would be equipped for hostile operations.

The vast magazines of naval stores, the host of skilled artisans, the immense facilities for fitting and repairing ships, furnished by this great commercial metropolis, would be at once used, directed, and absorbed by the navy-yard.

Its experienced staff of naval constructors, ordnance officers, and equipment officers, under naval command, aided by well-trained foremen and mechanics, long practiced in fitting ships of war, would bring all these

private establishments into harmonious co-operation with the central navy-yard to which they are contiguous.

I give it as my deliberate opinion that the present site of the New York navy-yard is, beyond compare, the best that could be found within the waters of New York; that it is ample in extent, susceptible of immense development at small cost, and in every way perfectly suited to the needs of the naval service.

The appropriation most urgently demanded there is one for the repair and preservation of the valuable cob-dock now in danger of sliding into the channel.

I beg to repeat all that I have said in regard to League Island and Norfolk in my preceding reports, and to urge liberal appropriations for them.

At League Island, the great work-shop and store-house for yards and docks has been finished; the great iron-working establishment for construction is far advanced, and we are now completing a foundation for the still larger building, four hundred (400) feet long, for steam-engineering. The next improvement of great importance is to begin the quay-wall and inclosure for basin, upon which its marine railways, the Bureau of Construction will rely in its ship building and repairing operations.

I would strongly urge the great importance of putting Pensacola in a state of preparation for possible contingencies in the Gulf of Mexico and the West Indies.

The rebuilding of the sectional dock is greatly needed, and a moderate annual appropriation to rebuild the workshops burned during the civil war would soon restore the establishment to its old effectiveness.

*Report of expenditures at navy-yards, stations, and Naval Asylum, for fiscal year ending June 30, 1874.*

Yards and stations.	Appropriations.					Totals.
	Navy-yard or station.	General maintenance.	Civil establishment.	Contingent.	Emergencies.	
Portsmouth, N. H. ....	\$109,997 91	\$87,890 34	\$4,399 93	.....	.....	\$202,288 18
Boston, Mass. ....	121,264 04	142,870 95	6,899 73	.....	\$2,736 25	273,770 97
Brooklyn, N. Y. ....	133,325 85	166,948 63	6,668 19	\$9,998 77	3,135 40	320,076 84
Philadelphia, Pa. ....	41,515 65	67,342 77	4,399 97	.....	.....	113,258 39
Washington, D. C. ....	73,662 94	88,636 79	5,400 00	7,330 44	.....	175,030 17
Norfolk, Va. ....	84,525 63	86,406 76	4,219 70	255 44	.....	175,407 53
Pensacola, Fla. ....	34,142 49	38,606 91	3,600 00	17,880 17	8,933 31	103,162 88
Mare Island, Cal. ....	483,116 94	109,388 12	4,985 90	.....	.....	597,490 96
New London, Conn. ....	5,000 00	5,963 32	.....	24 00	.....	10,987 32
League Island, Pa. ....	249,998 68	47,931 27	2,799 96	15,959 34	15,500 00	332,189 25
Sackett's Harbor, N. Y. ....	.....	1,101 77	.....	.....	.....	1,101 77
Mound City, Ill. ....	.....	6,655 14	.....	.....	.....	6,655 14
New Orleans, La. ....	.....	.....	.....	3,821 00	.....	3,821 00
Key West, Fla. ....	6,439 20	1,260 00	.....	.....	.....	7,699 20
Naval Asylum. ....	54,674 53	.....	.....	.....	.....	54,674 53
Totals. ....	1,397,663 86	851,002 77	43,373 38	55,269 16	30,304 96	2,377,614 13



**ABSTRACT OF OFFERS FOR SUPPLIES RECEIVED FOR FURNISHING ARTICLES COMING UNDER THE COGNIZANCE OF THE BUREAU OF YARDS AND DOCKS, MADE IN CONFORMITY TO THE ACT OF CONGRESS APPROVED MARCH 3, 1843.**

*Offers for supplies for the navy-yard at Portsmouth, N. H., under advertisement dated July 9, 1874.*

**Class No. 20. Hay and straw :**

Trickey & Jewett.....	\$2,500 00
Geo. A. Hammond.....	2,370 00
L. L. de Rochement.....	*2,010 00
John Stokel & Co.....	2,240 00

**Class No. 27. Anthracite coal :**

James & Williams .....	4,960 50
William H. Size .....	6,787 50
James Symington.....	5,505 00
Samuel G. French .....	5,053 50
D. Babcock & Co.....	5,137 50

**Class No. 27. Anthracite coal**

—Continued.

C. E. Walker & Co .....	*\$4,905 00
Howard Snelling & Co..	5,197 50

**Class No. 29. Cumberland coal :**

William H. Size.....	1,385 00
Samuel G. French.....	1,291 50
D. Babcock & Co.....	1,300 00
C. E. Walker & Co .....	*1,160 00
Howard Snelling & Co..	1,270 00

*Offers for supplies for the navy-yard at Boston, under advertisement dated July 9, 1874.*

**Class No. 20. Hay and straw :**

Trickey & Jewett.....	*\$2,700 00
L. L. de Rochement .....	2,760 00
A. D. Hoitt.....	2,775 00
Libby, Sawyer & Co....	3,200 00
Scott & Bridge .....	2,900 00

**Class No. 27. Anthracite coal :**

James & Williams.....	†5,670 00
James Symington.....	7,051 20

**Class No. 27. Anthracite coal**

—Continued.

Samuel G. French.....	*6,585 75
D. Babcock & Co .....	6,726 00
C. E. Walker & Co .....	6,630 00
Howard Snelling & Co..	6,807 00

**Class No. 29. Cumberland coal :**

D. Babcock & Co .....	†400 00
Howard Snelling & Co..	400 00

*Offers for supplies for the navy-yard at Brooklyn, N. Y., under advertisement dated July 9, 1874.*

**Class No. 20. Hay and straw :**

E. R. Shipman .....	*2,956 50
Geo. M. Phelps.....	2,961 00
Samuel G. French.....	3,240 00
Geo. Spear.....	3,600 00

**Class No. 27. Anthracite coal :**

James Symington.....	4,961 00
Samuel G. French.....	*4,689 75

**Class No. 27. Anthracite coal**

—Continued.

Kelsey & Loughlin.....	\$4,861 25
D. Babcock & Co.....	4,750 00

**Class No. 29. Cumberland coal :**

Samuel G. French.....	*765 50
D. Babcock & Co.....	857 50

*Offers for supplies for the navy-yard at Philadelphia, Pa., under advertisement dated July 9, 1874.*

**Class No. 20. Hay and straw :**

Paul J. Field .....	*\$672 00
Nathan Shoemaker.....	750 00

**Class No. 27. Anthracite coal :**

Paul J. Field .....	\$898 50
James Symington.....	*861 00
Plaisted & McCollin ....	874 50
Samuel G. French.....	994 50

\* Accepted.

† Informal.

‡ By lot.



*Offers for supplies for the navy-yard at League Island, Pa., under advertisement dated July 9, 1874.*

## Class No. 27. Anthracite coal:

Paul J. Field .....	\$624 00
James Symington.....	*594 00

## Class No. 27. Anthracite coal:

Plaisted & McCollin ....	\$598 00
Samuel G. French.....	673 00

*Offers for supplies for the navy-yard at Washington, D. C., under advertisement dated July 9, 1874.*

## Class No. 20. Hay and straw:

Frank Dorsey .....	\$945 00
Wm. Kiskadden, agent ..	1,008 00
Alex. Hunter .....	*828 00
Nathan Shoemaker.....	1,350 00
O. E. Heine.....	972 00
M. J. Ditto.....	1,152 00
C. T. Yoder.....	1,044 00

## Class No. 27. Anthracite coal:

John S. Killman.....	\$377 50
James Symington.....	*347 00
C. T. Yoder.....	412 50

## Class No. 29. Cumberland coal:

John S. Killman .....	†425 00
C. T. Yoder.....	*439 00

*Offers for supplies for the navy-yard at Norfolk, Va., under advertisement dated July 9, 1874.*

## Class No. 20. Hay and straw:

Peters Brothers.....	*\$2,046 68
George Reid.....	2,272 40
Robert J. Neely.....	2,169 80
C. T. Yoder.....	2,394 00
A. A. McCullough.....	2,272 40

## Class No. 27. Anthracite coal:

Robert J. Neely.....	\$837 60
C. T. Yoder.....	942 00
A. A. McCullough.....	*774 10

## Class No. 29. Cumberland coal:

Peters Brothers.....	286 50
Robert J. Neely.....	280 00
A. A. McCullough .....	*272 50

*Offers for supplies for the navy-yard at Pensacola, Fla., under advertisement dated July 9, 1874.*

## Class No. 20. Hay and straw:

Thos. P. Morgan.....	*\$800 00
Robert Pepper.....	1,000 00

Samuel G. French.....	571 50
D. Babcock & Co.....	*565 00

## Class No. 29. Cumberland coal:

## Class No. 27. Anthracite coal:

Thos. P. Morgan.....	750 00
James Symington.....	734 50

Thos. P. Morgan.....	\$375 00
Samuel G. French.....	318 25
D. Babcock & Co.....	*315 00

Opened August 6, 1874, in presence of—

WM. REYNOLDS, *Rear-Admiral, U. S. N.*

WM. P. S. SANGER, *Civil Engineer, U. S. N.*

A. E. MERRITT, *Chief Clerk.*

D. J. PARTELLO, *Clerk.*

NAVY DEPARTMENT, BUREAU OF YARDS AND DOCKS.



\* Accepted.

† Declined to contract.

*Offers to furnish and deliver 998,000 brick at the navy-yard, League Island, Pa., under advertisement of Bureau of Yards and Docks, dated June 20, 1874.*

## Class No. 1. Bricks:

Lloyd & Russell.....	\$15,025 00
Edwd. J. Mathews, prest.	12,706 50

## Class No. 1. Bricks:

Benjamin Allen.....	*\$12,337 00
---------------------	--------------

Opened July 21, 1874, in presence of—

WM. REYNOLDS, *Rear-Admiral, U. S. N.*

WM. P. S. SANGER, *Civil Engineer, U. S. N.*

A. E. MERRITT, *Chief Clerk.*

D. J. PARTELLO, *Clerk.*

NAVY DEPARTMENT, BUREAU OF YARDS AND DOCKS.

*Offers to furnish and deliver 1,000,000 bricks at the navy-yard, Norfolk, Va., under advertisement of Bureau of Yards and Docks, dated July 25, 1874.*

## Class No. 1. Bricks:

Windsor & Ford.....	*\$12,423 33½
F. R. Windsor .....	12,880 00
Herrel & Brown.....	12,840 00
George O. Coake & Co .	13,430 50
John Grinder.....	15,570 00
D. Pulman & Co.....	13,930 00

## Class No. 1. Bricks:

S. H. Robinson & Son..	†\$12,000 00
John Webster .....	15,670 00
Geo. W. Bowie.....	†11,415 00
Young & Hill.....	12,840 00
A. A. McCullough.....	15,400 00

Opened August 13, 1874, in presence of—

WM. REYNOLDS, *Rear-Admiral, U. S. N.*

A. E. MERRITT, *Chief Clerk.*

D. J. PARTELLO, *Clerk.*

EMIL S. FRIEDERICK, *Draughtsman.*

NAVY DEPARTMENT, BUREAU OF YARDS AND DOCKS.

The following estimates for the fiscal year ending 30th June, 1876, are respectfully submitted:

Sheet No. 1, for support of Bureau of Yards and Docks....	\$15,280
Sheet No. 2, general maintenance of yards and stations and contingent.....	910,000
Sheet No. 3, support of Naval Asylum.....	53,723
Sheet No. 4, repairs and preservation at navy-yards .....	591,500
Sheet No. 5, improvements at navy-yards .....	1,200,000

Total estimates of Bureau of Yards and Docks..... 2,770,503

I am, sir, very respectfully, your obedient servant,

C. R. P. RODGERS,  
*Chief of Bureau.*

Hon. GEO. M. ROBESON,  
*Secretary of the Navy.*

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876,  
by the Bureau of Yards and Docks, Navy Department.

Detailed objects of expenditure and explanations.	Estimated amount which will be re- quired for each detailed object of expenditure.	Amount appropri- ated for the cur- rent fiscal year ending June 30, 1875.
SALARIES.		
Chief clerk, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3) .....	\$1,800 00	.....
Draughtsman and clerk, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1) ..	1,800 00	.....
One clerk of class four, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1) ..	1,800 00	.....
Two clerks of class three, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1) ..	3,200 00	.....
One clerk of class two, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1) ..	1,400 00	.....
One clerk of class one, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1) ..	1,200 00	.....
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	840 00	.....
Two laborers, at \$720 each, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	1,440 00	.....
	13,480 00	\$13,480 00
CONTINGENT EXPENSES.		
Stationery, books, plans, drawings, incidental labor, and miscellaneous items, (appropriated) .....	1,800 00	1,800 00
FOR GENERAL MAINTENANCE OF YARDS AND DOCKS.		
For general maintenance of yards and docks; freights and transportation of materials and stores; printing, stationery, and advertising, including the commandants' offices; books, maps, models, and drawings; purchase and repair of fire-engines; machinery and patent right to use the same; re- pairs of steam fire-engines and attendance on the same; purchase and maintenance of oxen, horses, and driving teams; carts and timber-wheels, for navy-yard purposes; tools and repairs of the same; postage on letters and other mailable matter on public service, and telegrams; furniture for Government houses and offices in navy-yards; coal and other fuel; can- dles, oil, and gas; cleaning and clearing up yards, and care of public buildings; attendance on fires, lights, fire-engines and apparatus; inci- dental labor at navy-yards; water-tax; tolls and ferriages; pay of watch- men in navy-yards; awnings, and packing-boxes for Bureau of Yards and Docks purposes .....	860,000 00	760,000 00
CONTINGENT.		
For contingent expenses that may arise at navy-yards and stations .....	50,000 00	40,000 00
Amount appropriated December 31, 1873, to meet extraordinary expenses...	.....	20,000 00
NAVAL ASYLUM, PHILADELPHIA, PA.		
Superintendent .....	\$600 00	
Steward .....	480 00	
Matron .....	360 00	
Cook .....	240 00	
Assistant cook .....	168 00	
Chief laundress .....	192 00	
Three laundresses, at \$168 each .....	504 00	
Eight scrubbers and waiters, at \$168 each .....	1,344 00	
Six laborers, at \$240 each .....	1,440 00	
Stable-keeper and driver .....	360 00	
Master-at-arms .....	480 00	
Corporal .....	300 00	
Barber .....	360 00	
Carpenter .....	845 00	
	7,673 00	7,673 00
Furnaces, grates, and ranges .....	300 00	
Water-rent and gas .....	1,800 00	
Increase of library and car-tickets .....	250 00	
Furniture and repairs of same .....	1,750 00	
Cemetery and burial expenses .....	300 00	
Repairs and preservations .....	1,650 00	
Support of beneficiaries .....	40,000 00	
	47,050 00	45,600 00
	53,723 00	53,273 00
NOTE.—The expenses of the Naval Asylum to be paid from income of the Navy-pension fund, in compliance with provisions of act of March 1, 1869, 15 Statutes.		

*Estimates of appropriations required for the fiscal year, &c.—Continued.*

Detailed object of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
<b>REPAIRS AND PRESERVATION AT NAVY-YARDS.</b>		
Navy-yard, Portsmouth, N. H. ....	\$25,500 00	.....
Navy-yard, Boston, Mass. ....	100,000 00	.....
Navy-yard, Brooklyn, N. Y. ....	135,000 00	.....
Navy-yard, Philadelphia, Pa. ....	15,000 00	.....
Navy-yard, Washington, D. C. ....	20,000 00	.....
Navy-yard, Norfolk, Va. ....	90,000 00	.....
Navy-yard, Pensacola, Fla. ....	85,000 00	.....
Navy-yard, Mare Island, Cal. ....	115,000 00	.....
Naval stations, Sackett's Harbor, N. Y. ....	1,000 00	.....
Naval stations, New Orleans, La. ....	5,000 00	.....
	<b>591,500 00</b>	<b>\$500,000 00</b>
<b>Navy-yard, Boston, Mass. :</b>		
For iron-plating shop. ....	\$100,000 00	
For commencing boundary wall. ....	20,000 00	
For yards and docks workshop, and store-house. ....	35,000 00	
For new floor at rope-walk. ....	32,250 00	
For main entrance gate-way. ....	13,000 00	
For commencing coal-house. ....	30,000 00	
	<b>230,250 00</b>	.....
<b>Navy-yard, Brooklyn, N. Y. :</b>		
For continuation of work on cob-dock. ....	30,000 00	
For continuation of wall on Flushing avenue. ....	15,000 00	
For police-station. ....	10,000 00	
For coal-house. ....	50,000 00	
For dredging channels. ....	10,000 00	
	<b>115,000 00</b>	.....
<b>Navy-yard, Norfolk, Va. :</b>		
For commencing coal house No. 51. ....	50,000 00	
For commencing timber-shed No. 32. ....	50,000 00	
	<b>100,000 00</b>	<b>50,000 00</b>
<b>Navy-yard, Pensacola, Fla. :</b>		
For commencing timber-shed, joiner-shop, and cistern. ....	40,000 00	
For commencing rigging and sail loft. ....	30,000 00	
	<b>70,000 00</b>	<b>250,000 00</b>
<b>Navy-yard, Mare Island, Cal. :</b>		
For continuing stone dock. ....	450,000 00	
For removal of gas-works from site needed for dry dock. ....	6,750 00	
For commencing reservoir and water-pipes. ....	50,000 00	
For roads and pavements. ....	40,000 00	
For commencing quay-wall and wharves. ....	50,000 00	
For commencing timber-shed. ....	48,000 00	
	<b>644,750 00</b>	<b>250,000 00</b>
<b>New London, Conn. :</b>		
For continuation of yard. ....	40,000 00	
	<b>40,000 00</b>	<b>50,000 00</b>
Navy-yard League Island, Pa. ....		<b>300,000 00</b>
	<b>1,200,000 00</b>	<b>900,000 00</b>

No. 6.

## BUREAU OF ORDNANCE.

BUREAU OF ORDNANCE, NAVY DEPARTMENT,  
October 30, 1874.

SIR: I have the honor to submit the annual report of this Bureau, with accompanying estimates, for the fiscal year ending June 30, 1876.

Besides the ordinary duties of preparing our ships for service, and preserving the public property placed under its charge, the Bureau has continued its examination into the various important questions enumerated in its last annual report, and which are briefly discussed in the

succeeding paragraphs, each under its respective heading. Additional to these are mentioned the experiments of Mr. Norman Wiard at Nut Island, resumed during this summer, but not yet completed. At their conclusion a separate and detailed report will be made to the Department.

The most important operations of the Bureau occurred during November and December of last year, on the occasion of the seizure of the *Virginius* by a vessel of war of the Spanish navy.

It was deemed advisable to immediately arm and equip every available ship of the Navy then in the ports of the United States.

The complete and rapid armament of so many ships, including iron-clads and the largest frigates, although a heavy task, was nevertheless successfully performed without the omission of a single important detail. The exertions made were commensurate with the exigencies of the occasion, and involved a large accumulation of stores, nearly all of which, however, are still available for future operations.

#### RIFLED CANNON.

The organization of our ordnance dates from 1845, and from that period it has been fully recognized in the Navy that our ships should compensate for inferiority of numbers by superior armament of individual ships; and so long as the smooth-bore formed the batteries, that superiority was maintained by a limited number of powerful guns.

With the introduction of iron-clads, and the universal adoption of rifled cannon by other powers, we are forced to adopt the same armament; otherwise we shall, if engaged in war with even a second-rate power, find ourselves overmatched, not only in numbers, but power of individual ship. There is, however, no reason why our ships, heretofore superior to all others in armament, shall not be restored to equality.

The Bureau, therefore, recommends the entire re-armament of the Navy with breech-loading rifled cannon, which can be done at a very small cost in the present reduced state of number of ships and guns required.

With wooden ships the mere lodgment of a shell in the side before the explosion might inflict a fatal injury; but against armored or even wooden-cased double-bottomed ships, complete perforation and explosion of a large charge within is essential.

The present types of foreign armored cruising-ships carry from 4½ to 6 inches of armor; and at present we have no guns, except the 15-inch in the monitors, which will seriously injure the lightest of these armored vessels. Substitute a 7-inch or 8-inch rifle for the 11-inch smooth-bore, which even our smallest ships carry, and few of them would come off without great damage.

The sphere of offense of the monitors does not extend beyond 500 yards, which might be increased to 3,500 yards by the substitution of an efficient rifle of the same weight of 10-inch or 11-inch caliber for the 15-inch smooth-bore.

#### WIARD'S EXPERIMENTS.

The experiments of Mr. Norman Wiard on the conversion of smooth-bores to rifled cannon on his system commenced last autumn, and since continued under the nominal supervision of this Bureau, have not developed any new or unexpected results. A single shot was fired from each of two 15-inch guns of the Army pattern, one in its original state with round shot of 450 pounds weight and a charge of 140 pounds of

powder; the other rifled on Mr. Wiard's plan, with a pointed shot of the same weight and same charge of powder at similar targets composed of five 3-inch plates set up at a distance of 160 feet. The first broke up the plates; the second penetrated them. A few fires for comparative ranges were then made and the experiments suspended. The recoil, as was to be expected with a charge nearly treble that for which the gun was designed, was such (24 feet) as to be entirely uncontrollable in the turret of a monitor or indeed anywhere in service. This element it is essential to consider, for, notwithstanding the improvements in powder which are equivalent to an increased strength in the gun, the weight of the gun is designed for a 50-pound charge.

It would appear to those unacquainted with artillery practice that a great result had been obtained, but a comparison with other experiments will show that nothing new has been developed. Whitworth has fired a 9-inch shell of 404 pounds, propelled by 50 pounds of powder, through three 5 inch plates interlaminated with two 5-inch layers of iron concrete, (made of iron turnings and lead,) the whole forming a mass 25 inches thick. An equal result has been produced by the English 10-inch gun, firing a 400-pound shell with 70 pounds of powder at a distance of 1,000 yards. And by the Krupp 26-cm., firing 57 pounds of powder and 415-pound shot. Thus showing that with well-proportioned guns, projectiles and charges, the disproportionate and dangerous charges of Mr. Wiard are useless.

The experiments were resumed in September of this year, and at the thirteenth fire, with heavy charges and at the distant target, the rifled gun burst, the target not having been hit. This result I anticipated, and do not hesitate to declare that it is impossible to convert a cast-iron smooth-bore into an efficient rifle by any system of rifling.

Since this draught was prepared the Bureau has received a report of the burst, at the first fire, of a second 15-inch gun, Navy pattern, rifled on Mr. Wiard's plan, firing a charge of 180 pounds, and a sub-calibered shot of 492 pounds, aimed at a 30-inch target.

No person in the least acquainted with ordnance could hope to fire half a dozen such charges; therefore even if successful in a single fire no useful result was to be expected from the experiment.

The principal advantages of rifled projectiles consist in their greater penetration, due to the concentration of effect on a smaller and better form of surface; next in greater content of explosive for same caliber, then range, and lastly accuracy.

Since the weight of the gun is fixed by the construction of the vessel and the recoil cannot exceed certain well-defined limits, the conditions of caliber of gun, length of bore, weight of projectile, and charge of powder, are also fixed within close limits, and cannot be departed from without a loss of effect.

For these reasons neither the 15-inch nor 11-inch Navy guns can be converted into efficient rifles on any plan; even by reducing and lining the bore. They are too short to properly utilize a proportionate charge of suitable powder; nor can they be converted to breech-loaders, which the Bureau considers the essential feature of any rifled system.

#### POWDER.

The experiments on the improvement of powder have been prosecuted as far as limited means will permit, and the general questions of manufacture settled.

Our stock of gunpowder had been allowed to fall quite low during



the prosecution of these experiments, and last autumn a quantity was ordered, necessarily at a most unfavorable season. Fortunately, circumstances did not require immediate delivery, as the difficulties of manufacturing uniform powder in winter are very great. The Bureau submits the propriety of an appropriation for gradual increase of our stock.

#### BREECH-LOADING HOWITZERS.

The subject of increased efficiency of our boat and field artillery has attracted the earnest attention of the Bureau, which has prepared model guns of two classes: a light howitzer of 350 pounds, adapted to all boats, even the smallest; and a heavier one, of 500 pounds, firing the same projectile with different charges.

They are on two systems: one a wedge-breech, on the plan of Mr. B. B. Hotchkiss; the other a slotted screw. Both use metallic cartridges, which, in the opinion of the Bureau, is the best plan, and overcomes several objections to breech-loaders. The latter can, however, use the common cartridge-bag.

They are mounted on carriages which give 30° elevation, 45° depression, the latter condition being very useful as a defense against torpedo-boats. The model guns are completed in bronze, but the construction is stopped for want of funds, and because suitable steel blocks cannot be supplied by any of our steel manufacturers.

#### GATLING-GUNS.

Fifty of the small Gatling-guns have been purchased, a suitable carriage devised, and they are now ready for issue to the service.

This gun, too, has been arranged to fire down at great depression, a very important condition for a gun designed to be used in the tops and for firing into boats close alongside; some difficulties relative to feeding in this position remain to be overcome.

#### TORPEDO STATION.

The general character of the instruction at this station is given in the accompanying report of the board detailed to witness the examination of officers under instruction.

During the past year it has supplied complete outfits of torpedoes and electrical apparatus to all our cruising-ships, and the mechanical facilities of the station are sufficient for any probable future exigency. The assembly of ships at Key West afforded opportunity for extensive practice, developing defects of our system, and causing remedies to be applied. Frequent reports are made to the Bureau from cruising-ships of the efficiency of the apparatus now supplied.

The course of instruction was interrupted last autumn by the detachment for sea-service of most of the class before the completion of the course. In ordering a new class it was deemed advisable to utilize more of the favorable season for experimental practice. This has resulted in marked benefits.

The principal defect observed is, that the majority of the officers ordered for instruction go there expecting to be taught, not for the purpose of personal investigation and to learn from the great facilities placed at their disposal. Few have either the aptitude or application necessary for theoretical study. Nor does it appear to be necessary for the majority to take more than a practical course. Those who develop

particular aptitude, and those only, should be retained for further instruction during the winter.

It is also necessary that the officers of the station should be relieved of the routine instruction, and allot some time for independent theoretical and practical investigation, otherwise no progress will be made.

The torpedo school differs from most scientific and practical institutions in that there are no text-books, and few points determined by experiment. The whole subject is yet in an indefinite state, and some body of facts must be accumulated in order to have a subject to teach.

The torpedo-boats "Intrepid" and "Alarm" have been completed, but owing to the advanced season few experiments have been made with either to determine their capabilities.

The experiments recently made abroad show that little reliance is to be placed on stationary torpedoes for the defense of important harbors. The radius of destructive effect being quite limited, these machines must be very numerous, entailing a complication of cables and great risk of accident and failure. This Bureau is therefore of the opinion that for the defense of our large harbors (such as New York) the aid of the Navy, with monitors as bases for movable torpedoes, and swift torpedo-boats, will be required.

The movable torpedo, yet in its infancy, is receiving great attention as well as other methods of attacking iron-clad vessels beneath their armor.

This new element is, however, attracting the serious attention of all maritime powers, and is destined to play an important part in future naval operations. We are at least as far advanced as others, but I take leave to recommend liberal appropriations for experiments to develop the capabilities of this most important means of offense and defense.

I have the honor to be, with high respect, your obedient servant,

WILLIAM N. JEFFERS,  
*Chief of Bureau.*

Hon. GEO. M. ROBESON,  
*Secretary of the Navy.*

---

TORPEDO STATION,  
*Newport, R. I., October 23, 1874.*

SIR: We have the honor to submit herewith our report of the examination of the graduating class of students attached to this station, which we have witnessed, in accordance with the orders of the Department.

The following are the subjects of examination, viz:

Electricity.

Explosives.

Fuse-making.

The management and use of all kinds of torpedoes under different circumstances; and experiments made with various explosives.

It is very satisfactory to the board to be able to say that these examinations, both in the manner in which they were conducted and in the proficiency of the students, afford the strongest assurance of the competency and fidelity of the instructors, as well as of the zeal and capacity of the students.

The board is persuaded that the objects pursued at this station, the

course of instruction and discipline, and their special and general results, promise to be of vital importance to the future usefulness and efficiency of the naval service.

We have the honor to be, very respectfully, your obedient servants,

C. H. DAVIS, *Rear-Admiral and President.*

A. C. RHIND, *Captain.*

RICHARD W. MEADE, *Commander.*

W. A. KIRKLAND, *Commander.*

CHESTER HATFIELD, *Commander.*

Hon. GEO. M. ROBESON,  
*Secretary of the Navy.*

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1876,  
by the Bureau of Ordnance, Navy Department.*

Detailed objects of expenditure and explanations.	Estimated amount expenditure.	Amount appropri- ated for the cur- rent fiscal year ending June 30, 1875.
<b>SALARIES.</b>		
Chief clerk, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8) .....	\$1,800 00	
Draughtsman, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1) .....	1,600 00	
One clerk of class three, per act of July 12, 1870, (16 Stat. at L., p. 249, sec. 1) .....	1,600 00	
Two clerks of class two, same act .....	2,800 00	
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and March 3, 1869, (15 Stat. at L., p. 287, sec. 1) .....	840 00	
One laborer, per act July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	720 00	
Total .....	9,560 00	\$9,560 00
<b>CONTINGENT EXPENSES.</b>		
Stationery, books, and miscellaneous items, (appropriated act June 20, 1874) ..	800 00	800 00
<b>ORDNANCE AND ORDNANCE STORES.</b>		
Fuel, tools, and material of all kinds necessary in carrying on the mechan- ical branches of the Ordnance Department of the several navy-yards, magazines, and stations, (appropriated act of June 6, 1874) .....	122,026 00	
Labor at the several navy-yards, magazines, and stations, (appropriated act of June 6, 1874; .....	200,145 00	
Necessary repairs to ordnance buildings, magazines, gun-parks, boats, light- ers, wharves, machinery, and appendages, (appropriated act of June 6, 1874) .....	44,483 00	
Miscellaneous items, to wit: freight to foreign and home stations, adver- tising and auctioneers' fees, cartage and express charges, repairs to fire- engines, gas and water pipes, gas and water-tax at magazines, toll, fer- riage, foreign postage, telegrams, &c., (appropriated act of June 6, 1874) ..	8,152 00	
Total .....	474,806 00	
<b>IMPROVEMENTS, AS FOLLOWS, VIZ:</b>		
Navy-yard, Boston, Mass., at magazine, Chelsea:		
For general repairs, grading, and improving the grounds at magazine, Chelsea, (submitted) .....	1,500 00	
Navy-yard, Brooklyn, N. Y., at the ordnance dock:		
To the crib-work on the east and southeast face of the ordnance dock, filling in, grading, and improving said dock, planking face of the dock, laying iron shot-beds, laying rail-track between the avenues of gun-park, to facilitate moving of guns, &c., (submitted) .....	25,000 00	
Navy yard, Philadelphia, Pa., at magazine, Fort Mifflin:		
Brick cook-house, ten by twelve feet, to take the place of present wooden one, (submitted) .....	300 00	
Brick kitchen, adjoining gunner's residence, to take the place of present wooden one, (submitted) .....	2,000 00	
Shed on wharf, for loading and unloading shells, (submitted) .....	850 00	

Estimates of appropriations required for the service, &c.—Continued.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
IMPROVEMENTS—Continued.		
Navy-yard, Norfolk, Va., at magazine :		
Powder-boat, for transportation of powder to and from the magazine, (submitted) .....	\$6,000 00	
Force and lift pump, necessary for use at Saint Helena, (submitted) .....	42 00	
Fire-engine, (submitted) .....	750 00	
Magazine, Mare Island :		
Fitting up racks in new magazine for storage of powder, (submitted) .....	2,275 00	
Fence inclosure of new magazine, (submitted) .....	1,600 00	
Grading, graveling, and brick drains for new and old magazines, (submitted) ..	2,558 00	
Small magazine, for receiving on storage filled powder-tanks, for ships in commission, (submitted) .....	5,250 00	
Completing windows, doors, shutters, &c., at new magazine, (submitted) ....	1,500 00	
	524,431 00	\$340,000 00
TORPEDO CORPS.		
Purchase, manufacture, and preservation of gunpowder, nitro-glycerine, gun-cotton, &c., (appropriated, act of June 6, 1874) .....	12,000 00	
Purchase and manufacture of electrical apparatus, galvanic batteries, and insulated wire, (appropriated, act of June 6, 1874) .....	15,000 00	
Purchase of copper, iron, wood, and other materials necessary for the manufacture of torpedoes, and for work on the same, (appropriated, act of June 6, 1874) .....	27,000 00	
Construction of torpedo-boats, purchase of copper-work, hulks, and contingent expenses, (appropriated, act of June 6, 1874) .....	28,500 00	
Labor, including one chemist, pyrotechnist, electrician, one foreman machinist, and one writer, (appropriated, act of June 6, 1874) .....	15,000 00	
Repairs to buildings and wharves, and material and labor for sea-wall, (appropriated, act of June 6, 1874) .....	2,500 00	
	100,000 00	92,000 00
CONTINGENT.		
Contingent expenses of the ordnance service of the Navy, (appropriated, act of June 6, 1874) .....	1,000 00	1,000 00

Respectfully submitted.

AUGUST 26, 1874.

WILLIAM N. JEFFERS,  
Chief of Bureau of Ordnance.

No. 8.

BUREAU OF MEDICINE AND SURGERY.

NAVY DEPARTMENT,  
BUREAU OF MEDICINE AND SURGERY,  
October 31, 1874.

SIR: I have the honor herewith to submit the annual report of this Bureau for the past year.

NAVAL HOSPITAL FUND.

The first subject to which I would respectfully invite your attention is the condition of the naval-hospital fund, to which also urgent reference was made in the last annual report. This fund is not, and from the necessity of the case cannot be, self-sustaining. The two sources from which its income is derived produce a sum that may be calculated in advance with almost absolute precision. These are "hospital money," which is deducted from the pay of every officer, seaman, and marine in

the Navy, at the rate of twenty cents per month, and "stopped rations," charged at the rate of thirty cents per diem for every officer and man subsisted at the expense of the hospital department. On a basis of 8,500 men and about 1,500 officers, representing the legal strength of the Navy, or 10,000 persons in all, the former would yield \$24,000 per annum, and the latter, taking an average of the last five years, may be counted on to yield an amount not exceeding \$15,000, making the round sum of about \$39,000. These sums are transferred by the Treasury Department to the credit of the naval-hospital fund, not at regular and stated intervals, but from time to time, and in larger or smaller amounts, as balances are found to be due on the settlement of paymasters' accounts. The status of the fund is therefore a very precarious one, and may fluctuate at any given period between moderate ease and complete exhaustion. Of late years, however, as a general rule, the credits have been on the smallest possible scale, and it is now well understood at the Treasury that no back or reserved credits, of any considerable amount for former years, remain to be made to it. During the last twelve months the transfers from all sources have not exceeded \$112,470.70, but no transfer, except of the most trifling character, is possible in the coming year.

The only other possible source of increase to the fund is from the operation of a provision in the act establishing navy hospitals, approved February 26, 1811, the second section of which directs "that all fines imposed on navy officers, seamen, and marines, shall be paid to the commissioners of navy hospitals." On careful inquiry, I cannot learn that any such disposition has ever been made of these moneys. Without doubt by far the largest portion is irrecoverably lost; but, with the hope of reclaiming even a small portion, I have caused the subject to be brought to the notice of the proper officers of the Treasury, who are now engaged in its investigation. With the most favorable results, so little can be expected from this source, that it may be practically disregarded.

The support of naval hospitals thus depends, and for the future must continue to depend, on the income accruing within the year to the naval-hospital fund from hospital money and stopped rations of the sick; and hereafter the aggregate of these will not be swollen by transfers made on account of preceding years. Its precise amount therefore is nothing more than the solution of a problem whose factors are all known.

Now, the annual cost of maintaining the hospital department, as far as the same is chargeable to this fund, has for several years past averaged about \$130,000. Notwithstanding the exercise of the most rigid economy during the last year, the expenses have fallen but little below this sum, and a less amount cannot well be depended on as sufficient for the future. It is true the outbreak of yellow fever at the navy-yard, Pensacola, entailed unusual burdens on the finances of the Bureau, and has swollen the aggregate of expenditures beyond anticipated limits. Yet such emergencies are liable to arise at any time, and when they occur must be provided for, be the cost what it may.

In consequence of the death from yellow-fever of the two medical officers attached to the yard, and prior to the arrival of those ordered in their places, it became necessary to employ private physicians as well as additional nurses, and hence the commandant of the yard, (himself soon to fall a victim to the disease,) in the exercise of a wise discretion, summoned the most eminent professional talent to his assistance. The expenses of every kind, thus incurred, will amount to nearly \$10,000; and yet, small as the sum is, the meager resources of the Bureau are embarrassed in its endeavors to meet it. I mention this significant fact

principally to show how closely ordinary expenses must keep pace with our ordinary income.

In view of the foregoing statement of facts, and of the importance of maintaining the medical department on a proper footing, I respectfully urge upon you the necessity which exists of applying to Congress for a special appropriation to the naval-hospital fund.

To make good deficiencies and carry on with efficiency the hospital-service for the remainder of the present fiscal year, \$50,000 will be required, and for the fiscal year ending June 30, 1876, \$100,000.

#### NAVAL HOSPITALS.

During the twelve months now closing, nothing further has been attempted than to keep these establishments as nearly as possible in the condition they were in at the last report. In spite of every effort, their deterioration is rapidly increasing, and they are now in need of repairs largely beyond our means to effect. The buildings within and without require painting and general renovation, while the grounds and cemeteries attached to them present a most neglected appearance. The sum of \$25,000, asked for in the estimates of the Bureau, is barely sufficient to preserve the former from decay; and this done, but little remains for the necessary care and improvement of the surroundings. For years past this amount was regularly appropriated for "repairs and improvements," but at the last session, from motives of economy, it was cut down to \$5,000; a sum so entirely inadequate that it merely serves to execute the most indispensable repairs to buildings, without leaving a dollar to spare for other purposes. This will be obvious from the consideration that seven spacious hospitals, and two smaller ones, with a large building used for a laboratory, in addition to grounds, cemeteries, &c., have to be kept in good order out of an amount no greater than that appropriated for the purchase of bunting for the Navy.

Suitable accommodations for the sick are imperatively needed at the Pensacola station. The present wooden building standing in the center of the navy-yard, besides being ill adapted to hospital purposes, is a source of infection to the houses around, and its destruction as soon as the approach of cold weather permits cannot be avoided, although not the slightest provision for the care of the sick will then remain. While I am clearly of the opinion that a permanent and substantial structure should be erected in its stead, and that in the end it would be the most economical, I refrain from urging it on account of the heavy outlay required, the valuable time consumed in its erection, and the necessity which presses upon us of preparing hospital accommodation as speedily as possible after the removal of the present building.

I therefore recommend that a hospital more or less temporary in character be constructed during the winter, on or close to the site of the old hospital, near the Barrancas, which has the reputation of being a healthy situation, is easy of access, and is incapable of diffusing infection through the navy-yard or the adjacent towns. The cost of such a building will be about \$30,000, for which an appropriation will be required.

I beg to renew the recommendation made in the last annual report, that an appropriation of \$50,800 be asked of Congress, for the construction of surgeon's quarters, drains, roads, water-pipes, &c., at the naval hospital, Mare Island, Cal. As these improvements have long been needed and would greatly conduce to the efficiency of the estab-



lishment, the propriety of soon commencing them is commended to your favorable consideration.

The want of libraries for the use of the sick at our naval hospitals is greatly to be regretted, but owing to insufficiency of means could never be obviated save in the most imperfect manner. Some of the hospitals are entirely without these indispensable comforts for the sick, and those best off in this respect possess but a handful of half-worn books, for which they have been indebted to private liberality and occasional charity. Surely a state of things like this reflects no credit on the Navy, and should not be allowed to continue a moment longer than is absolutely necessary. A special appropriation in this case is not contemplated; but should an increase of the hospital fund be allowed, it is my intention, with your approbation, to apply as much of it as can be spared from more pressing wants to this much-needed and humane object.

#### YELLOW-FEVER EPIDEMIC AT PENSACOLA, FLA.

During the recent prevalence of yellow fever at the Pensacola navy-yard, two medical officers, I regret to say, fell victims to its ravages, viz, Surgeon John B. Ackley and Acting Passed Assistant Surgeon George B. Todd, while a third medical officer, subsequently ordered there, experienced soon after his arrival an attack of the disease.

Doctors Ackley and Todd were officers of high professional attainments and general intelligence. They fell in the heroic discharge of duty, leaving behind them an example that sheds luster on the branch of the service to which they belonged.

#### SURGEONS' NECESSARIES AND APPLIANCES.

By the naval appropriation bill for 1874-'75, the amount allotted for "surgeons' necessities and appliances" was reduced from \$40,000 to \$30,000. As the latter sum is found to be entirely inadequate for the medical and surgical wants of the Navy, in the estimates for the next fiscal year I have recommended that the appropriation be restored to the first-named amount, which, for many years, was the regular appropriation, and had never been found more than sufficient for the purpose.

The irregularly-recurring demands of the service compel the laboratory to keep on hand a considerable stock of medicines and instruments for any emergency that may arise, and for this reason the appropriation for one year has to be partially expended in laying up a stock of articles for issue in the next. In consequence of the large number of vessels fitted out during the Spanish excitement last autumn, an unexpected burthen of \$20,000 devolved upon the Bureau, no portion of which has since been refunded, as was done by special act in the case of other bureaus similarly circumstanced. Owing to this cause the present fiscal year found the Bureau with its supplies materially diminished, and without the means of replenishing them. Under these circumstances it considers its request, for the restoration of the appropriation to its original amount of \$40,000, nothing more than reasonable.

#### NAVAL MEDICAL SCHOOL.

I again respectfully solicit your favorable consideration of the project of providing higher medical instructions for assistant surgeons. As my views on the subject were expressed at considerable length in the

last annual report of the Bureau, it is not deemed necessary to repeat them here. I will only add that, on mature reflection, I am more than ever convinced of the great need of something in the nature of an organized system, by which practical instruction, not otherwise within their reach, except at great personal expense, may be secured for this class of young officers.

The object now proposed is not to establish an academy analogous to that at Annapolis for the education of midshipmen and engineers, but to provide at some central point, on a moderate scale, the requisite facilities for completing the professional training of assistants in such branches as practical anatomy and surgery, the use of the microscope, &c., and the performance of chemical operations as far as applicable to medicine. Most of the young medical men who come before our naval board for examination possess the merest theoretical knowledge on these branches, a practical acquaintance with which is universally recognized as of the greatest value to the physician.

A comparatively small sum would purchase all the microscopes, surgical instruments, chemical apparatus, anatomical material, books, &c., necessary for the use of the school. As the instruction is designed to be given by medical officers already in the Navy, and as far as practicable by those discharging other duties, there would be no additional expense on this score.

#### BUREAU PUBLICATIONS.

An intelligent and experienced medical officer of the Navy, for the last two years, in the intervals of other duties, and with but little extraneous assistance, has been sedulously employed under the supervision of the Bureau in the examination of hundreds of medical journals from hospitals and ships, with a view to the collection of the numerous cases of surgical injuries they were known to contain. A most extensive body of facts, replete with scientific value and of the greatest interest to the profession, is the result of this investigation. I am gratified to announce that the work of arranging and classifying these cases has been prosecuted with so much diligence that a volume of considerable size is now in manuscript, and will be ready for the hands of the printer early in the coming year.

Thus far the enterprise has been carried on without other aid than that afforded by our own resources, but unless pecuniary assistance is obtained to defray the cost of publication, this valuable record of naval medical experience cannot be given to the world. To publish it in a durable form \$30,000 will be required, and I respectfully ask that Congress be appealed to for the necessary appropriation.

Very respectfully, your obedient servant,

J. BEALE,

*Surgeon-General United States Navy.*

Hon. GEORGE M. ROBESON,  
*Secretary of the Navy.*

A.—Statement of sick, compiled from reports of sick from the naval stations in the United States, and from vessels in commission on home and foreign stations, for the year ending December 31, 1873.

Hospitals.	Remaining sick December 31, 1872.	Admitted in 1873.	Discharged in 1873.	Died in 1873.	Total treated in 1873.	Remaining sick December 31, 1873.	Percentage of deaths to whole number of cases treated.
Chelsea, Mass.....	23	129	120	6	151	25	.....
Brooklyn, N. Y.....	62	335	303	17	403	83	.....
Philadelphia, Pa.....	43	217	220	14	260	26	.....
Annapolis, Md.....	6	20	22	1	26	3	.....
Washington, D. C.....	16	118	113	5	134	16	.....
Norfolk, Va.....	32	118	127	5	150	18	.....
Pensacola, Fla.....	6	25	28	.....	31	3	.....
Mare Island, Cal.....	44	112	93	9	156	54	.....
Yokohama, Japan.....	6	84	85	2	90	3	.....
Total.....	243	1, 158	1, 111	59	1, 401	231	. 04

Yards and stations.	Remaining sick December 31, 1872.	Admitted in 1873.	Discharged in 1873.	Died in 1873.	Total treated in 1873.	Remaining sick December 31, 1873.	Percentage of deaths to whole number of cases treated.
Portsmouth, N. H.....	3	208	203	3	211	5	.....
Boston, Mass.....	6	245	247	4	251	.....	.....
Brooklyn, N. Y.....	10	211	240	.....	251	11	.....
Philadelphia, Pa.....	4	180	180	.....	184	4	.....
Washington, D. C.....	7	445	438	1	452	13	.....
Norfolk, Va.....	4	174	177	1	178	.....	.....
Pensacola, Fla.....	.....	6	6	.....	6	.....	.....
Mound City, Ill.....	1	13	14	.....	14	.....	.....
Mare Island, Cal.....	4	125	117	.....	129	12	.....
League Island, Pa.....	1	36	36	1	37	.....	.....
Torpedo station.....	.....	51	48	.....	51	3	.....
Naval Academy.....	10	1, 013	1, 002	1	1, 023	10	.....
Total.....	50	2, 737	2, 718	11	2, 787	58	. 004

Receiving-ships.	Average number on board in 1873.	Remaining sick December 31, 1872.	Admitted in 1873.	Discharged in 1873.	Died in 1873.	Total treated in 1873.	Remaining sick December 31, 1873.	Percentage of deaths to whole number of cases treated.
Portsmouth, N. H.....	116	1	76	76	.....	77	1	.....
Boston, Mass.....	400	3	105	92	1	108	9	.....
Brooklyn, N. Y.....	836	18	440	427	.....	458	31	.....
Philadelphia, Pa.....	116	6	114	106	.....	120	14	.....
Norfolk, Va.....	136	2	57	59	.....	59	.....	.....
Mare Island, Cal.....	131	.....	53	48	2	53	3	.....
Total.....	1, 735	30	845	814	3	875	58	. 003

## RECAPITULATION.

	Aggregate number of officers and men on board vessels in 1873.	Remaining sick December 31, 1872.	Admitted in 1873.	Discharged in 1873.	Died in 1873.	Total treated in 1873.	Remaining sick December 31, 1873.	Percentage of cases to number of persons on board.	Percentage of deaths to number of persons on board.	Percentage of deaths to number of persons treated.
Hospitals .....	243	1, 158	1, 111	59	1, 401	231	.....	.....	.04	
Navy-yards and stations .....	50	2, 737	2, 718	11	2, 787	58	.....	.....	.004	
Receiving-ships .....	1, 737	30	845	814	3	875	58	.50	.002	.003
Vessels in commission at sea .....	12, 723	255	8, 582	8, 460	55	8, 837	322	.70	.004	.10
Total .....	14, 460	578	13, 322	13, 103	128	13, 900	668	.96	.008	.009

*Summary of vessels in commission.*

Aggregate number on board during the year 1873 .....	12, 723
Remaining sick December 31, 1872 .....	255
Admitted in 1873 .....	8, 582
Discharged in 1873 .....	8, 460
Died in 1873 .....	55
Total treated in 1873 .....	8, 837
Remaining sick December 31, 1873 .....	322
Percentage of cases to whole number of persons on board .....	.70
Percentage of deaths to whole number of persons on board .....	.004
Percentage of deaths to number of persons treated .....	.006

At the close of the year 1872 there remained under treatment 578 cases; during the year 1873 there occurred 13,322 cases of disease, injury, &c., making a total of 13,900 cases treated during the year, of which number 128 died, 13,103 were returned to duty or discharged the service, leaving 669 cases under treatment at the close of the year 1873.

The average strength of the Navy (officers, seamen, marines, engineer service, and coast survey included) for the year 1873, as near as can be ascertained, was about 14,460.

The percentage of cases admitted, to the whole number of persons in the service, was about .96, or each person was on the sick-list  $\frac{96}{100}$  of a time during the year. The percentage of deaths to the whole number of persons in the service was .008, and the percentage of deaths to the whole number of cases treated was .009.

The total number of deaths from all causes reported at the Navy Department from October 1, 1873, to September 30, 1874, was 146.

## APPENDIX B.

Summary of prevalent forms of disease on home and foreign service for the year ending December 31, 1873.

	North Atlantic.		South Atlantic.	European.		Pacific.	Special service.	Total.
	Cases treated.	Deaths.		Cases treated.	Deaths.		Cases treated.	Deaths.
Aggregate number of men.....	1	2,154	1	1	1,364	1,364	1,364	1,364
Febris enterica.....	3	1	1	1	1	1	1	1
Febris flava.....	1	1	1	1	1	1	1	1
Febris intermittens.....	1	1	1	1	1	1	1	1
Febris remittens.....	1	1	1	1	1	1	1	1
Morbili.....	1	1	1	1	1	1	1	1
Vaccinia.....	1	1	1	1	1	1	1	1
Varicella.....	1	1	1	1	1	1	1	1
Adynamia.....	1	1	1	1	1	1	1	1
Anæmia.....	1	1	1	1	1	1	1	1
Anasarca.....	1	1	1	1	1	1	1	1
Carcinoma.....	1	1	1	1	1	1	1	1
Pleurodynia.....	1	1	1	1	1	1	1	1

## APPENDIX B.

*Summary of prevalent forms of disease on home and foreign service for the year ending December 31, 1873—Continued.*

	North Atlantic.		Deaths.													Deaths.
	Cases treated.	Deaths.	4	50	57	1	60	43	14	1	1	1	1	1	1	
<b>Class II.—Constitutional diseases—Continued.</b>																
Order I.—Diathetic diseases—Continued.																
Pellagra .....	47	31	4	50	57	1	60	43	14	1	1	1	1	1	1	4
Rheumatismus acutus .....	75	21														255
Rheumatismus chronicus .....																255
Order II.—Developmental diseases:																
Senectus .....																9
Order III.—Tubercular diseases:																
Scrofula .....	8								1							10
Tuberculosis .....			1						1							8
Vermes .....	1	1							2							13
<b>Class III.—Parasitic diseases:</b>																
<b>Class IV.—Local diseases:</b>																
Order I.—Diseases of the nervous system:																
Apoplexia .....	2	1							2	1						8
Cephalalgia .....	23	10							5							73
Cerebritis .....	3															4
Chorea .....	2															2
Dementia .....	9								1							15
Epilepsia .....	16	3							10							59
Insolatio .....	4															14
Irritatio spinalis .....																5
Mania .....		1							1							7
Melancholia .....	2								1							1
Neuralgia .....	35	23							15							164
Notalgia .....																2
Paralysis .....	1	1							8	1						10
Order II.—Diseases of the eye:																
Acumulois .....									1							2
Conjunctivitis .....	15	9							11							75
Hemeralopia .....	1															9
Herpes cornes .....																1
Iritis .....	4	1							1							16
Opthalmia .....	5	1							9							23



Retinitis	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
-----------	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



Ankylosis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**7 N**

APPENDIX C.

Naval-hospital fund.

The condition of this fund is represented as follows :	
Balance on hand October 1, 1873.....	\$18, 663 35
Transferred to the credit of the fund in settlement of accounts, by the Fourth Auditor, from October 1, 1873, to October 1, 1874.....	112, 470 70
Total.....	131, 134 05
Deduct amount expended from October 1, 1873, to October 1, 1874.....	129, 540 20
Balance on hand October 1, 1874.....	1, 593 85

APPENDIX D.

Insane of the Navy.

On the 30th September, 1873, there remained under treatment in the Government Hospital for the Insane, near this city : 3 officers ; 1 late ensign ; 7 seamen ; 1 late seaman ; 1 ordinary seaman, extra ; 1 late ordinary seaman ; 4 landsmen ; 1 coal-heaver ; 1 late first-class boy ; 10 marines, and 2 beneficiaries.	
Total .....	32
Admitted during the year ending September 30, 1874 : 2 officers ; 1 late boatswain's mate ; 7 seamen ; 3 seaman extra ; 4 ordinary seamen ; 2 ordinary seamen, extra ; 1 late ordinary seamen ; 8 landsmen ; 1 marine ; 1 beneficiary, and 1 first-class boy. Total.....	
	31
Total number under treatment during the year.....	63
The discharges in the course of the year were :	
By recovery : 1 officer ; 2 seamen ; 1 seaman, extra ; 3 landsmen ; 1 marine ; 1 ordinary seaman, extra, and 1 first-class boy. Total.....	
	10
By death : 1 late seaman ; 1 late first-class boy, and 1 late ordinary seaman.	
Total .....	3 13
Leaving in the institution on the 30th September, 1874 : 4 officers ; 1 late ensign ; 1 late boatswain's mate ; 12 seamen ; 2 seamen, extra ; 5 ordinary seamen ; 2 ordinary seamen, extra ; 9 landsmen ; 1 coal-heaver ; 10 marines, and 3 beneficiaries. Total .....	
	50

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876  
by the Bureau of Medicine and Surgery.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
SALARIES.		
One clerk of class four, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8) ..	\$1, 800 00	.....
One clerk of class three, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8) ..	1, 600 00	.....
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	840 00	.....
One laborer, per act of July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	720 00	.....
	4, 960 00	\$4, 960 00
CONTINGENT EXPENSES.		
Stationery and miscellaneous items.....	400 00	400 00
SURGEONS' NECESSARIES AND APPLIANCES.		
For the support of the medical department ; for surgeon's necessities ; for vessels in commission, navy-yards, naval stations, Marine Corps, and Coast Survey, (appropriated June 6, 1874).....	40, 000 00	30, 000 00

Estimates of appropriations required for the service of the fiscal year, &c.—Continued.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
REPAIRS AND IMPROVEMENTS OF HOSPITALS.		
For repairs to naval laboratory, naval hospitals and appendages, including roads wharves, outhouses, sidewalks, fences, gardens, farms, cemeteries, steam heating-apparatus, furniture, head-marks for graves in cemeteries, &c., (appropriated June 6, 1874)	\$25,000 00	\$5,000 00
CIVIL ESTABLISHMENT.		
For civil establishment at the several naval hospitals and naval laboratory. (appropriated June 6, 1874)	40,000 00	39,161 00
CONTINGENT.		
For contingent expenses of the Bureau; for freight on medical stores; transportation of insane patients; advertising; telegraphing; purchase of books; expenses attending the naval medical examining boards; purchase and repair of wagons and harness; purchase of cows and horses, and feed for same; purchase of trees, seeds, garden-tools, and fuel, &c., (appropriated June 1, 1874)	25,000 00	25,000 00

Respectfully submitted.

J. BEALE,  
Surgeon-General, United States Navy.

No. 8.

BUREAU OF PROVISIONS AND CLOTHING.

NAVY DEPARTMENT,  
BUREAU OF PROVISIONS AND CLOTHING,  
Washington, October 13, 1874.

SIR: In accordance with instructions contained in your letter of the 1st instant, I have the honor to submit herewith estimates marked "A," "B," "C," "D," and "E," for the fiscal year ending June 30th, 1876.

The money for the purchase of clothing is considered as a *fund*, (and not as an appropriation,) which, as ten per cent. was added to the cost of all issues, remained, until within the last four years, nearly undiminished. Since the abolition of this percentage, however, the charges for the lost and damaged clothing, for that supplied gratuitously to officers and men to replace articles destroyed by accident, or to prevent the spread of disease; the losses on sales of clothing which had remained so long on hand as to be unfit for issue, and the incidental expenses in the handling of clothing, have so reduced this fund that it is now almost exhausted, and an appropriation is imperatively necessary.

In lieu of the outfit of clothing to seamen recommended by several of my predecessors, I would recommend that a credit of three months' pay be given to each enlisted man when he shall have been shipped three months, which, in my opinion, would be more effectual to prevent desertions than an outfit to each man at the time of his shipment.

To provide the seamen of the Navy with standard articles of clothing and small stores, and insure that uniform appearance which is desirable, it is necessary to ship these articles from the United States, and the cost of this shipment has to be defrayed from the contingent fund.

The Bureau would, therefore, most earnestly urge that the contingent appropriation be increased to \$75,000, (the amount appropriated for a number of years prior to last year,) which was found, during the last few years, to be barely sufficient, with the strictest economy, to meet this, the heaviest charge upon it, and other contingent expenses.

I have the honor to be, very respectfully, your obedient servant,  
JAS. H. WATMOUGH,  
Acting Paymaster General, U. S. N.

Hon. G. M. ROBESON,  
Secretary of the Navy, Washington, D. C.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876,  
by the Bureau of Provisions and Clothing.

Detailed objects of expenditure and explanations,	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
A.—EXPENSES OF THE BUREAU OF PROVISIONS AND CLOTHING.		
For salary of chief clerk, per act of July 5, 1862, (12 Stats. at L., p. 511, sec. 3)	\$1, 800 00	.....
For salary of one clerk of class four, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8) .....	1, 800 00	.....
For salary of three clerks of class three, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8) .....	4, 800 00	.....
For salary of two clerks of class two, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8) .....	2, 800 00	.....
For salary of three clerks of class one, per act of July 23, 1866, (14 Stat. at L., p. 208, sec. 8) .....	3, 600 00	.....
For salary of one messenger, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3) .....	840 00	.....
For salary of one laborer, per act of July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	720 00	.....
	16, 360 00	\$14, 760 00
B.—CONTINGENT EXPENSES OF THE BUREAU.		
For blank-books, stationery, and miscellaneous items; (appropriated Stat. at L., pamphlet edition, p. 103, sec. 1) .....	800 00	860 00
C.—PROVISIONS FOR THE NAVY.		
For provisions for the officers, seamen, and marines, viz, 8,500 men, 900 commissioned officers, and 1,200 marine officers and privates; (appropriated Stat. at L., pamphlet edition, p. 56, sec. 1) .....	1, 465, 000 00	.....
For the purchase of water for ships .....	35, 000 00	.....
	1, 500, 000 00	1, 335, 000 00
D.—CLOTHING AND CLOTHING MATERIALS FOR THE NAVY.		
For the purchase of clothing and clothing materials; submitted .....	200, 000 00	.....
E.—CONTINGENT EXPENSES OF THE NAVY.		
For freight and transportation to foreign and home stations; for candles; for fuel; for interior alterations and fixtures in inspection buildings; for tools and repairing same at eight inspections; for special watchmen in eight inspections; for books and blanks; for stationery; for telegrams advertising, postages, and express charges; for tolls, ferriages, and car tickets; for ice; and for incidental labor, not chargeable to other appropriations; (Stat. at L., pamphlet edition, p. 56, sec. 1) .....	75, 000 00	50, 000 00

JAS. H. WATMOUGH.  
Acting Paymaster-General, U. S. Navy.



## No. 10.

## BUREAU OF STEAM ENGINEERING.

NAVY DEPARTMENT, BUREAU OF STEAM-ENGINEERING,  
*Washington, November 23, 1874.*

SIR: I have the honor respectfully to submit the annual report of the Bureau, with estimates for the several navy-yards, for repairs to the machinery of naval steamers; for the preservation and refitting of machinery of vessels required on cruising stations; and for materials, stores, &c., under cognizance of this Bureau.

## MACHINERY, ETC., REPAIRED.

During the year past the machinery, &c., of the following-named vessels has been repaired and refitted for active service. Vessels marked with an asterisk (\*) have had new boilers placed on board: Plymouth, (second rate,) Blue Light, (tug,) and \*Speedwell, (tug,) at the Kittery navy-yard; Franklin, (first rate,) new auxiliary boilers, and \*Brooklyn, (second rate,) at the Charlestown navy-yard; Colorado, (first rate,) Florida, (first rate,) Minnesota, (first rate,) Kansas, (third rate,) Dictator, (iron-clad,) Roanoke, (iron-clad,) and Catalpa, (tug,) at the Brooklyn navy-yard; Canandaigua (second rate) and Ajax, (iron-clad,) at the Philadelphia navy-yard; \*Shawmut (third rate) and Mayflower, (tug,) at the Washington navy-yard; Pensacola, (second rate,) Saranac, (second rate,) and Naragansett, (third rate,) at the Mare Island navy-yard; \*Catskill, (iron-clad,) at the Continental Iron Works, Green Point, N. Y.; \*Montauk, (iron-clad,) at the Quintard Iron Works, N. Y.; iron-clads \*Jasou, \*Nahant, \*Passaic, and Wyandotte, at the Delaware River Iron and Ship-Building Works, Chester, Pa.; and the iron-clads Canonicus and \*Lehigh, at the works of the Harlan & Hollingsworth Co., Wilmington, Del.

In addition to the above, the machinery, &c., of the vessels which rendezvoused at Key West during the last summer were more or less repaired at that station, as required, which necessitated the employment of a considerable number of mechanics, the most of whom were brought from New York for that purpose.

## NEW MACHINERY, ETC.

Of the 50'' by 42'' engine converted into compound engines, one pair has been completed and erected on board the Swatara, at the Brooklyn navy-yard, and satisfactory results were obtained from the trials at the dock, and during its performance at sea while the vessel was steaming to Kerguelen Island with the scientific party sent out to observe the transit of Venus. Reports were forwarded from Bahia, Brazil, and Cape Town, Africa. Of the remainder, one pair is in process of erection on board the Marion, at Portsmouth navy-yard; one pair is being erected in the Vandalia, at Charlestown navy-yard, (nearly completed,) and one pair is ready for erection on the Quinnebaug, at Philadelphia navy-yard. The compound engines for the Galena, at Norfolk navy-yard, and for Mohican, at the Mare Island navy-yard, are being pushed toward completion as rapidly as practicable.

The machinery of the United States steamer Tennessee has been completed during the year and dock-trials made. The performance was such as to promise satisfactory results when the final trial-tests are made at

sea. The condition of the vessel prevented these final practical tests at sea (provided by the contract) being made upon the completion of the machinery.

The machinery, &c., under contract for the eight sloops-of-war is either ready, or nearly ready, for erection on board the respective vessels, and some of it is now being forwarded to the navy-yards where it is to be erected. It is expected that these engines will be completed within the next three months; some of it probably at an earlier date.

The compound machinery under contract for the Nipsic at the Washington navy-yard is completed as far as possible before being erected in the vessel, and has been delivered at the yard.

The engine and boilers for the tug Monterey are completed and in progress of shipment to Mare Island. New boilers for the Monocacy on the Asiatic station have been completed and shipped in sections to Japan, to be erected on board that vessel there, and boilers for the Ashuelot and Palos are nearly ready for shipment to that station; this course having been found to be by far the most economical, owing to the unskilled and high-priced labor charged for work of the character required in the engineering department of United States naval vessels on that station.

#### MACHINERY OF VESSELS, ETC., UNDER REPAIR.

The machinery, &c., of the following-named vessels is now undergoing thorough repair; those marked with an asterisk (\*) are to have new boilers: \*Cohasset (tug) and \*Leyden (tug) at the Boston navy-yard; Tallapoosa, (4th rate,) \*Wyoming, (3d rate,) and \*Triana, (tug,) at the Washington navy-yard; \*Rose (tug) at the Pensacola navy-yard; \*Monadnock, (iron-clad,) Camanche, (iron-clad,) and \*Iroquois, (3d rate,) at the Mare Island navy-yard; \*Amphitrite, (iron-clad), at the works of the Harlan & Hollingsworth Co., Wilmington, Del.; \*Nantucket (3d rate) at the works of Cramp & Sons, Philadelphia, Pa.; and the \*Miantinmah (iron-clad) at the Delaware River Iron & Ship-Building Works, Chester, Pa. New boilers are also constructing for the tugs Pinta and Mayflower. Such of the boilers stored in the navy-yards, constructed for vessels not completed, as can be utilized will be used for vessels fitting out, to which they may be adapted as required.

Old boilers removed from the Dacotah and California have been repaired and put on board the Kearsarge and Pensacola. The two remaining boilers from the California will probably be used in the Iroquois.

#### COMPARATIVE TEST OF ENGINES OF ORDINARY AND OF COMPOUND TYPE.

A recent trial at the Boston navy-yard of engines of the simple and of the compound type has just been completed under the supervision of Chief Engineer C. H. Loring, United States Navy, and Mr. Charles E. Emery, consulting engineer for the United States revenue marine, the report of which is appended herewith, marked A.

#### PRESERVATION OF BOILERS.

The rapid decay of boilers used in connection with surface condensers having become a question of grave consideration, many experiments have been made with a view of arresting this decay by corrosion. None of the methods heretofore tested, except in a single instance, resulted

successfully, except to a very limited and partial extent. The apparatus for arresting and neutralizing the acids in the water supplying the boilers from surface condensers, and preventing their introduction in the boilers, referred to in my last annual report, has given gratifying results on all the vessels where it has been thoroughly tested.

#### SCREW-PROPELLERS.

The inefficiency of the two-bladed screws, owing to insufficient areas of blades, continues to be reported. These screws were substituted by the Department, several years since, in place of those of four blades then used, with a view to decreasing the resistance of the propeller while the vessel was under sail alone.

As the screw-ports of these vessels were designed for screws of four blades, they would not admit of one of a less number having the same area; consequently, in every one of the many cases where the two-bladed screw was substituted, the vessel was so crippled for want of sufficient propelling area, that it was almost impossible to steam three miles an hour against an ordinary head wind, using full engine-power. In some cases the original four-bladed screws have been replaced, and the efficiency of such vessels brought up to their original standard.

With a view to determining exactly what the relative losses were when dragging the screw held stationary, or when allowed to revolve freely by pressure of the water, and also to determine the exact law governing the losses of the screw-propeller in fraction of the pitch used, a full and elaborate set of experiments were made at the Mare Island navy-yard, the results of which are herewith appended, marked B.

#### FIREMEN.

In my last annual report, attention was called to the condition of this part of the engineer force on shipboard. I would now further state that with the exception of the men on the paddle-wheel steamers and iron-clads in commission, there are practically no *firemen* in the service. Their duties are performed by seamen, part of whom are shipped for the performance of this particular duty, but the larger portion are detailed from the men on deck, as emergency requires. These men are unskilled in the performance of this duty, to which they are unaccustomed, and, in many cases, regard being detailed to perform it a punishment, causing dissatisfaction and many desertions, and resulting at least in inefficient firing, and consequent waste of fuel.

#### PERSONNEL OF THE ENGINEER CORPS.

The last report of this Bureau called your attention to the large and rapidly increasing number of vacancies in the list of assistant engineers, and the difficulty of securing competent persons to fill them. During the three years ending December 31, 1873, forty-eight vacancies occurred by death, resignation, dismissal, and retirements. During this period only eleven appointments were made to the grade, although it is believed that every applicant who seemed at all suitable has received permission to be examined for that grade. In the year 1873, while seventeen vacancies occurred, only two of the candidates for admission were found to possess the necessary qualifications, and during the current year but one candidate from civil life has thus far been recommended for appointment. As the number of engineer graduates from

the Naval Academy must, (while the number of cadets remains limited as at present,) at most, be small, and insufficient to fill the vacancies as they occur from time to time, I respectfully recommend that the number of cadets appointed to the academy be increased to such a number as will secure not less than fifteen graduates per annum.

Congress at its last session very wisely increased the duration of the engineering course for these cadets from two years to four. The course of instruction, restricted by the brief term of the old system to the salient points of mechanical engineering, can now be developed so as to take in the more recondite details of the profession. Some things still remain to be desired, among which may be urged instruction in ship-building, for the reason that a knowledge of its calculations must be considered a necessary prerequisite to the sound designing of marine-engines. The course at present given to the cadet-midshipmen in the department of seamanship is most excellent, and, with the addition of lectures upon the practical details of iron-ship construction, would be of infinite benefit to the cadet-engineers.

It can hardly be out of place here to advert to the subject of physical culture, and to urge its paramount importance for cadet-engineers, whose professional duties at sea often make such demands upon their bodily endurance as to prematurely break down and retire from active service many promising officers. The retired and sick lists of the corps exhibit this most prominently. For these students, whose specific practical exercises are of an engrossing and confining nature, out-of-door drills are especially desirable, if not absolutely required, to develop their physique. Indeed, it appears that all the practical drills and exercises given to the cadet-midshipmen, except only in seamanship, would tend to make the cadet-engineers more useful in their service after graduation.

#### *Greenland coal.*

Specimens of the coal brought from the Waigat Straits, on the north side of Disco Island, Greenland, by Commander D. L. Braine, U. S. N., commanding United States steamship Juniata in 1873, have, through the kindness of Prof. Benjamin N. Martin, of the New York University, been carefully analyzed. This coal is from a formation of very different age from that which furnishes our ordinary coal; abounds in impressions of peculiar plants; and, as a matter of scientific interest, specimens of this coal were forwarded for analysis. Appended herewith are the papers relating to this subject, marked C.

#### *Estimates.*

The estimates for the next fiscal year, for salaries, for purchase of oil, stores, tools, &c., and for pay of mechanics and laborers employed in the engineering departments of the several navy-yards, are herewith submitted, marked D and E.

Very respectfully, your obedient servant,

WM. W. W. WOOD,  
*Chief of Bureau.*

Hon. GEO M. ROBESON, .  
*Secretary of the Navy.*

## A.

*Report of the trials of the steam-machinery of the United States revenue-steamers Rush, Dexter, and Dallas, at the United States navy-yard, Boston, Mass., in the month of August, 1874, by a joint board of United States naval and United States revenue-marine engineers.*

In the early part of the present season there were completed, for the United States revenue-marine, three new revenue-steamers, named, respectively, in honor of ex-Secretaries of the Treasury, the Rush, the Dexter, and the Dallas. The three vessels are similar as respects the hulls, the screws, and the boilers, but the engines are different each from the other: that of the Rush being a compound engine; that of the Dexter, a high-pressure condensing-engine; and that of the Dallas, a low-pressure condensing-engine.

The vessels are each 140 feet long over all, 129½ feet between perpendiculars at water-line, 23 feet extreme breadth of beam, and 10 feet depth of hold. The draught of water aft is about 8 feet 10 inches. The hulls are of wood. The vessels represent the smallest type of full-powered screw revenue-cutters adapted for cruising-purposes. They were all intended to be rigged as schooners; but it having been decided to send the Rush to the Pacific coast, she was rigged as a top-sail schooner. One of the vessels averaged upward of eleven nautical miles per hour for six consecutive hours on her trial-trip, and neither of them averaged less than 10 knots; the machinery being entirely new in each case.

Each vessel has one boiler, 11 feet wide on base and 9 feet high, with a double segmental shell, each portion being 6 feet 2 inches in diameter. There are three furnaces in each boiler, located between water-legs attached to the bottom of the shell. The products of combustion return through tubes within the shell. The boiler of the Dallas, designed for low-pressure steam, is 13 feet 9 inches long, the front connection being built in and the steam-chimney attached to the boiler. The boilers of the two other vessels were designed for high-pressure steam, and are each 12 feet long, independent of front connection, which is a separate structure bolted on. The steam-chimney is also a separate structure, connected to boiler by a large tube. The boiler of the Dallas has 160 tubes, 3½ inches in diameter and 9 feet 3 inches long. The boilers of the two other vessels have each 158 tubes, 3½ inches in diameter and 9 feet 8 inches long.

The Rush is propelled by a compound engine with vertical cylinders and intermediate receiver, arranged fore and aft at the same level, the pistons being separately connected to cranks at right angles.

The cylinders are thoroughly steam-jacketed, felted, and lagged, and are respectively 24 and 38 inches in diameter, with 27 inches stroke of piston. The steam is distributed to the high-pressure cylinder by a short slide-valve, with adjustable cut-off plates sliding on back of same. The distribution of steam to the low-pressure cylinder is effected by means of a double-ported slide-valve, with lap proportioned to cut off the steam at about half-stroke. The surface-condenser is arranged on the starboard side. It supports two main columns from the cylinders, and contains 900 square feet of condensing surface. The air-pump is operated from the cross-head of the low-pressure engine. The circulating-pump is of the centrifugal type, operated by a small engine directly connected. The screw is 8 feet 9 inches in diameter, with mean pitch of 14½ feet. The engine was intended to be operated regularly with a steam-pressure of 80 pounds, but during the trials, hereafter referred to, it was reduced to correspond to the pressure carried on trial of Dexter. The machinery was designed by Charles E. Emery, consulting engineer, and built by the Atlantic Works, East Boston, Mass., the contractors for the vessel complete.

The Dexter was also built under contract with the Atlantic Works, East Boston, Mass. The engine of this vessel is built from designs of that establishment, and is of the inverted type, with a single cylinder, 26 inches in diameter and 36 inches stroke of piston. The cylinder is not jacketed, but is carefully felted and lagged. Steam is distributed by a short slide-valve, with adjustable cut-off plates sliding on back of same. The condenser is located outside the frame, but it and the air and circulating pumps are exact duplicates of those in the Rush. The engine and boiler are designed to be operated with a maximum steam-pressure of 70 pounds.

The Dallas was built under contract with the Portland Machine Works, of Portland, Me. The engine was designed in that establishment, and is of the inverted type, with a single cylinder, 36 inches in diameter, with 30 inches stroke of piston. The cylinder is not steam-jacketed, but is carefully covered with non-conducting composition, and lagged. Steam is distributed by a short slide-valve, with adjustable cut-off plates sliding on back of same. The surface-condenser is located under starboard frames, and has the same condensing-surface as those in the other vessels. The air and circulating pumps are also substantially the same. The engine and boiler are designed to be operated with a maximum steam-pressure of 40 pounds.

The opportunity presented of testing in these vessels the relative merits of the three kinds of engines attracted considerable attention. Several manufacturers and engi-



neers expressed a desire that competitive trials be made. A correspondence on the subject was opened between the Navy and Treasury Departments, which resulted in an agreement for a trial, under the direction of persons representing both services, and the undersigned, Chief Engineer Charles H. Loring, U. S. N., and Charles E. Emery, consulting engineer, were selected in behalf of the Navy and Treasury Departments, respectively, to make preparations for and take general charge of the trials.

When the preparations were complete, the following officers were detailed to conduct the experiments, viz: Chief Engineer Edward Farmer, U. S. N.; Chief Engineer George D. Emmons, U. S. N.; Chief Engineer J. H. Pulsifer, U. S. R. M.; and Chief Engineer J. A. D. Bremon, U. S. R. M.

As assistants to these gentlemen, there were detailed Passed Assistant Engineers Harvey and Cook, U. S. N.; Assistant Engineer Tobin, U. S. N.; and Mr. E. Hugentobler. The care of the machinery was intrusted to the engineer of the respective vessels. The chief engineers detailed for the experiments stood regular watches with an assistant while the experiments were in progress, and at the close certified duplicate copies of the logs, which are deposited in the Navy and Treasury Departments, respectively. They also computed the principal results for their own satisfaction, and returned to their regular duties; but two of the assistants were retained to assist the undersigned in making out a statement in detail, which is presented in the annexed tables.

#### MANNER OF MAKING THE EXPERIMENTS.

The experiments were made with the vessels secured to the wharf.

The coal, which was anthracite, of fair quality, was broken on the wharf to proper size, (the vessels' bunkers having been closed and sealed,) and filled into bags to a certain weight. The bags were sent on board when ordered by the senior engineer on watch, he making record on the log of the number of bags and the time of receipt, a similar record being made by one of the men on the wharf. At the end of the hour, the number of bags of coal actually put on the fire was reported from the fire-room and entered in the appropriate column. The several records agreed with each other, and the total amount expended corresponded with the total number of bags filled on wharf. The ashes were measured into buckets (of which the mean weight was ascertained) and tallied as they were hoisted out. They were afterward weighed in gross on the wharf, and the two accounts found to agree substantially.

The feed-water was measured after its delivery from the surface-condenser and before its return to the boiler, for which purpose a tank of boiler-plate was especially constructed, having a plate dividing it vertically into two equal parts. In the upper edge of the plate was cut a rectangular notch eight inches long, by which the height to which each half of the tank could be filled was determined. The mean of the weight of water which the half-tank contained was 1,129½ pounds, at a temperature of 72 degrees Fahrenheit.

In the computations for each experiment, the weight of water is reduced to correspond with mean temperature.

One of the feed-pumps was disconnected from the check feed-valve, and its discharge-pipe led to a small receiving-tank placed over the two halves of the measuring-tank, into which this pump forced the condensed water from the hot-well. The receiving-tank had on its bottom two cocks, one over each half-tank, so that either could be filled from it at will. The other feed-pump had its suction-pipe detached from the hot-well, and connected with the bottoms of the two half-tanks through a cock on each, so that the contents of either could be drawn out and discharged into the boiler.

The method of measuring the water and recording it was as follows: One side having been filled, the cock over it on the receiving-tank was closed and the other over the empty half opened. When the water in the full one had settled to the height of the edge of the notch, its cock in the feed-pipe was opened and the contents pumped into the boiler, (care being taken to empty one in less time than it required to fill the other.) When empty, its feed-cock was closed. When the water in the tank being filled reached within a few inches of the notch, a gong in engine-room was sounded to call attention, and when it reached the notch the gong was struck twice; at this instant the assistant engineer in the engine-room noted the reading of the counter, and an attendant in the fire-room noted and reported the height of water in the glass gauge on boiler, as shown by a scale of inches secured to it. The attendant at the tank also noted the time of filling and the temperature when the tank was half emptied. After entering the number of the counter in the log, the assistant engineer ascertained the numerical difference between that and the preceding entry, and, if it was far from the average, its cause was sought for.

By this system of checks all errors of record could be detected, and it was possible to preserve and utilize any continuous run which came to an end through derangement of the engine. All parts of the tanks, pipes, and cocks were plainly visible to the eye; and had any leaks occurred therein, they must have been detected. That the con-





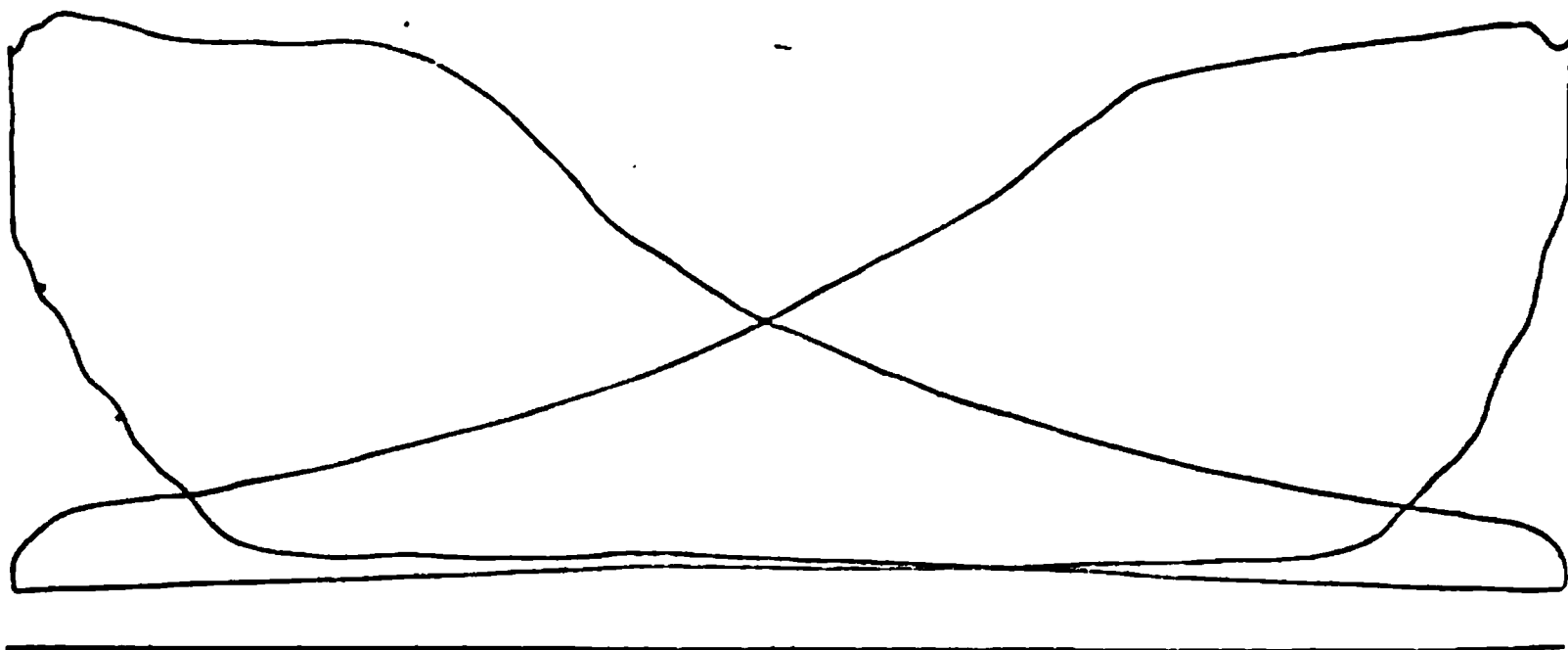
## INDICATOR DIAGRAMS.

---

U. S. REVENUE-STEAMER "RUSH."

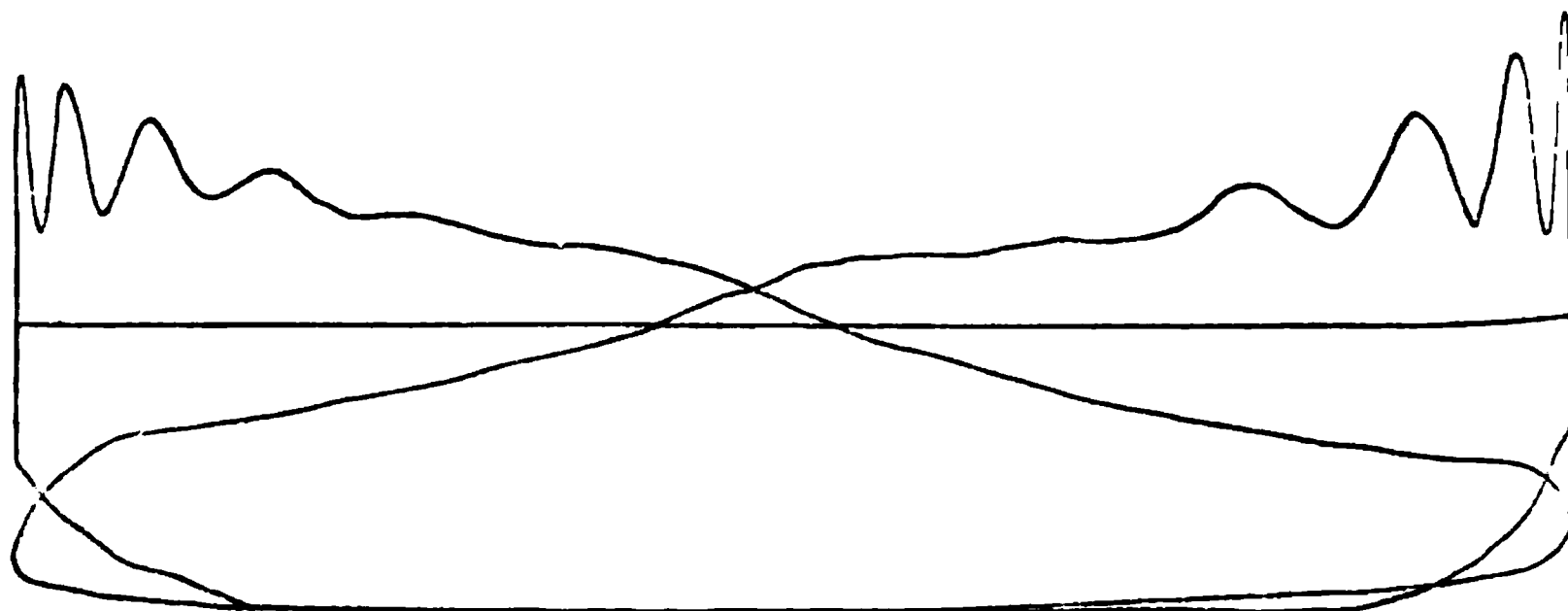
*High-Pressure Cylinder.*

Scale of indicator, 40 pounds per inch.



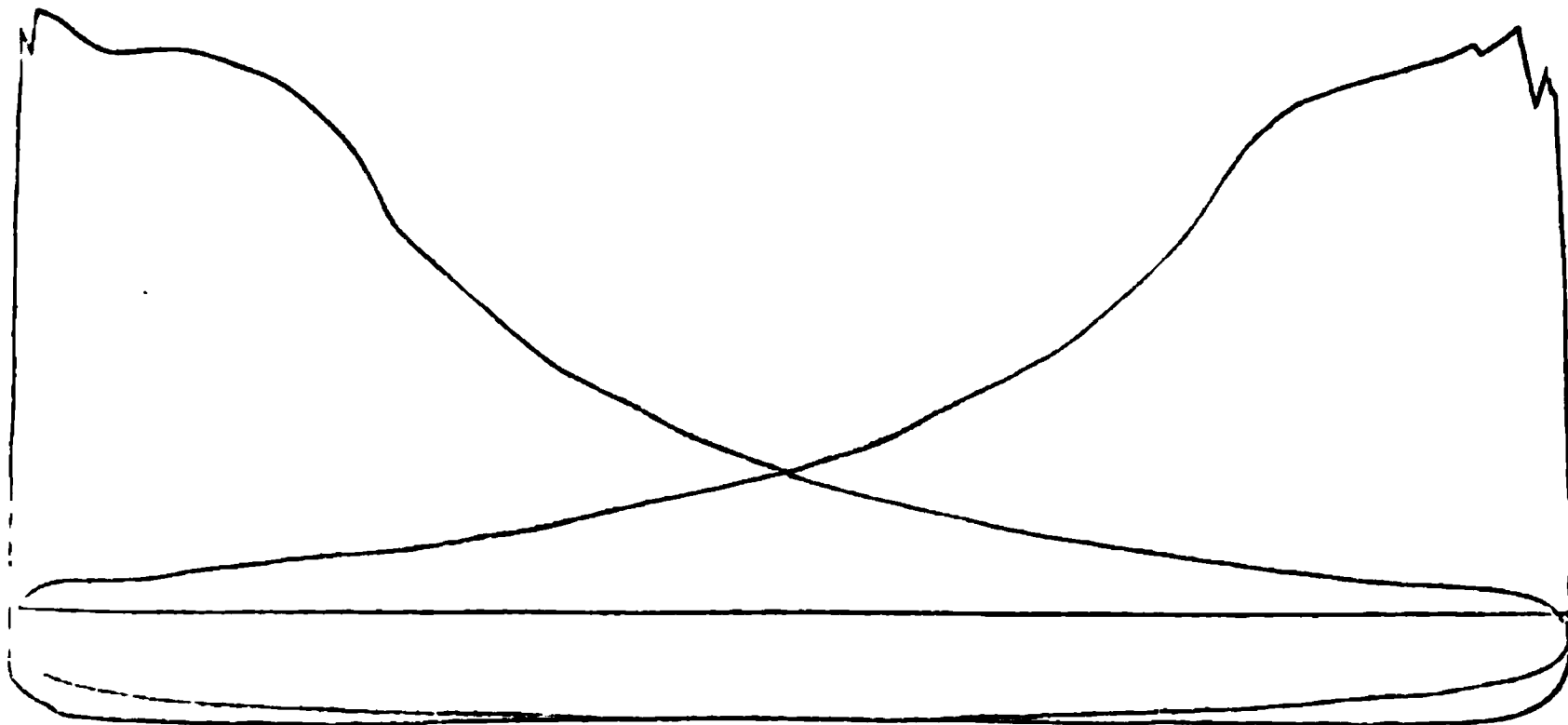
*Low-Pressure Cylinder.*

Scale of indicator, 16 pounds per inch.



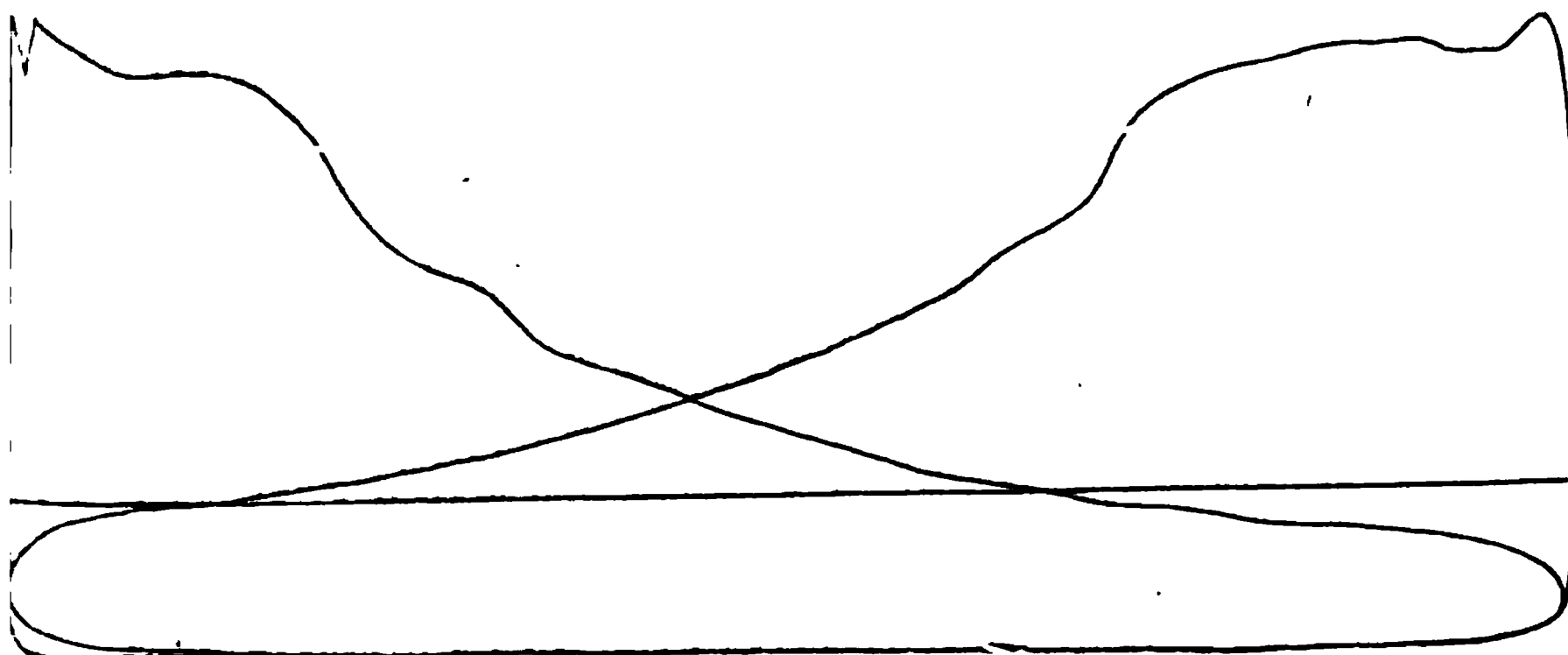
U. S. REVENUE-STEAMER "DEXTER."

Scale of indicator, 40 pounds per inch.



U. S. REVENUE-STEAMER "DALLAS."

Scale of indicator, 24 pounds per inch.



## B.

*Experiments made at the Mare Island navy-yard, California, with different screws applied to the United States steam-launch No. 4, to ascertain their relative propelling efficiency.*

During the time the writer was chief engineer of the Mare Island navy-yard, he made the experiments hereinafter described with the different screws applied by him to the United States steam-launch No. 4, attached to that yard. These experiments were promptly authorized, on the application of the writer, by Admiral Porter, then at the head of the Navy Department, without whose liberal support they could not have been made.

The machinery of the launch, designed by Mr. William R. Eckhart, the superintendent of machinery at the navy-yard and formerly an engineer in the Navy, was completed in the autumn of 1869, before the arrival of the writer. In the conduct of the experiments, all of which were projected and made by the writer in person, Mr. Eckhart rendered most valuable assistance.

The principal objects of the experiments were to ascertain, 1st. The relative economic propelling efficiency of screws of the same diameter, uniform pitch, and number of blades, but of different fractions of the pitch. 2d. The relative economic propelling efficiency of two-bladed, four-bladed, and Mangin screws, having the same diameter, uniform pitch, and fraction of pitch; in other words, having the same quantity and kind of surface. 3d. The relative economic propelling efficiency of a screw of the same diameter as the others, and having the same fraction of pitch as one of them, but three blades and a greater pitch expanding from the forward to the after edge of the blades. 4th. The relative economic propelling efficiency of this three-bladed screw, converted into a Griffith screw.

To ascertain the foregoing facts, there were to be determined for each screw and for different speeds of vessel with the same screw, the gross-effective indicated horsepower developed by the engines; the pressure per square inch of pistons required to work the engines *per se*, or disconnected from the screw; the resistance of the vessel *per se*, by dynamometer; the speed of the vessel; the slip of the screws, and the friction of their respective surfaces on the water. These quantities enable the distribution of the whole power exerted to be accurately computed, and the values of the parts applied to produce the different effects ascertained.

Incidentally to the experiments, the economic vaporization of the boiler with anthracite was ascertained; and the power exerted by the engines to give the three-bladed screw a certain number of revolutions per minute, with the vessel held stationary to the wharf.

Before narrating the experiments, it is necessary to give the following description and dimensions of the hull and machinery employed:

## HULL.

The hull is of wood. Its submerged surface is not coppered, but was kept well painted and cleaned during the experiments. With the vessel at the below draught of water, (at which the experiments were made,) the top of the rail at the bow is 6 feet above the water-line; at the center of the vessel's length, 3 feet 3 inches; and at the stern, 4 feet 3 inches. There is a house on the deck, 6 feet 8 inches wide, 38 feet 9 inches long, and rising, as a mean, 3 feet 9 inches above the top of the rail. The rudder is of metal and counterbalanced:

Length on load water-line, from forward edge of rabbet of stem to after side of sternpost.....	54.40 feet.
Extreme breadth on load water-line.....	11.88 feet.
Depth of hull, from load water-line to lower edge of rabbet of keel.	<div> <div>Forward.....</div> <div>Mean.....</div> <div>Aft.....</div> </div> <div> <div>2.457 feet.</div> <div>3.156 feet.</div> <div>3.855 feet.</div> </div>
Depth of the keel below the lower edge of its rabbet.	<div> <div>Forward.....</div> <div>Mean.....</div> <div>Aft.....</div> </div> <div> <div>0.500 foot.</div> <div>0.729 foot.</div> <div>0.958 foot.</div> </div>
Load-draught of water from the bottom of the keel.	<div> <div>Forward.....</div> <div>Mean.....</div> <div>Aft.....</div> </div> <div> <div>2.957 feet.</div> <div>3.885 feet.</div> <div>4.813 feet.</div> </div>
Area of the greatest immersed transverse section at load-draught.	24.98 square feet.
Area of the load water-line .....	456.54 square feet.
Area of the immersed external surface of the hull proper, exclusive of keel and rudder.....	603. square feet.
Area of the immersed external surface of the hull, inclusive of keel (100.8 square feet) and rudder (132 square feet) .....	717. square feet.

Displacement, per inch of draught, at load water-line.....	38.045 cubic feet.
Displacement, per inch of draught, at load water-line.....	1.0891 ton.
Displacement, to load water-line.....	814.100 cubic feet.
Displacement, to load water-line.....	23.3053 tons.
Distance of the greatest transverse section abaft the middle of the length of the load water-line.....	3.42 feet.
Height of the meta center above the center of displacement.....	4.93 feet.
Depth of the center of displacement below the load water-line...	1.09 feet.
Center of displacement abaft the middle of the length of the load water-line.....	2.26 feet.
Angle of dead-rise at the greatest transverse section.....	13½ degrees.
Ratio of the area of the greatest immersed transverse section to the area of its circumscribing parallelogram.....	0.6663
Ratio of the area of the load water-line to the area of its circumscribing parallelogram.....	0.7064
Ratio of the displacement to its circumscribing parallelopipedon	0.3991
Ratio of the length of the hull on the load water-line to its breadth	4.5791

In the following table will be found the areas of the greatest immersed transverse sections, areas of water-lines, displacements, and angles at bow and stern, for different water-lines; commencing at the load water-line previously given, and descending by vertical depths of 6 inches. These water-lines, it must be observed, are parallel to the load water-line corresponding to the vessel's draught of water, forward and aft, previously given :

Number of water-line.	Depth, in feet, from lower edge of rabbet of keel to water-line.		Area of greatest immersed transverse section, from lower edge of rabbet of keel to water-line, in square feet.	Area of water-line, in square feet.	Displacement, from lower edge of rabbet of keel to water-line, in cubic feet.	Angles of water-lines.	
	Forward.	Aft.				Bow.	Stern.
7 .....	2. 457	3. 855	24. 98	456. 54	814. 100	38°	77°
6 .....	1. 957	3. 355	19. 04	421. 26	593. 915	37°	56½°
5 .....	1. 457	2. 855	13. 26	370. 86	395. 360	34½°	48°
4 .....	0. 957	2. 355	7. 93	294. 71	228. 025	30°	35°
3 .....	0. 457	1. 855	3. 62	182. 16	105. 980	19½°	22½°
2 .....	.....	1. 355	1. 25	81. 90	20. 090	8°	11½°
1 .....	.....	0. 855	0. 35	26. 04	15. 470	4½°	3½°

From the following dimensions the form of the immersed solid of the hull can be ascertained. They are ordinates to the curves of the water-lines formed by the outside of the planking, and are given in feet from the forward and aft center line of the hull. That line is divided into sixteen equal parts of 3.4 feet each, and the corresponding transverse sections are numbered from 1 at the stem to 17 at the stern; from each point of division a right-angled ordinate is erected on which the dimensions referred to apply.

The water-lines are 6 inches apart, measured vertically. They are not parallel to the rabbet of the keel, but to the surface of the water when the vessel has the draught of water forward and aft as given above. Water-line A is at the water-level, water-line B is 6 inches below A and parallel to it, and so on.

[illegible]

## ENGINES.

There are two direct-acting, non-condensing engines. The cylinders are vertical, and are placed immediately above the crank-shaft, with their connecting-rods working downward. The cylinders rest upon columns supported in turn upon a cast-iron bed-plate, which contains the crank-shaft journals. The valve-chests of the cylinders are placed between the cylinders back to back. There are two small slide-valves to each cylinder, one at each end, connected in the chest by rods. These valves work with the full pressure of the steam upon their backs, and receive their movement direct from two eccentrics and a Stephenson link. They have no lap on the exhaust side, but sufficient steam-lap to cut off the steam at 0.858 of the stroke of the piston from the commencement when in full gear. In this state the steam is released when the piston has completed 0.96 of its stroke, and the cushioning commences at 0.94 of the stroke. The Stephenson link is connected directly to the head of the valve-stem.

The cranks for the after cylinder are forged in the crank-shaft. For the forward-cylinder there is but one crank; it was forged separately and keyed on, and its pin is overhung. The crank-shaft has three journals, one for the forward cylinder, and two for the after cylinder. The thrust-collars are forged on the crank-shaft, and their pillow-block is supported on the engines' bed-plate.

There are no collars on the screw or line shafting.

The feed-pump is worked direct from an eccentric on the crank-shaft between the engines. This pump is slightly inclined, is single-acting, and the eccentric-rod is articulated to the bottom of the pump-plunger.

The feed-water is fresh, and is carried in a tank; before it enters the boiler, it is passed through a heater supported on the top of the boiler, and has its temperature raised to about 125° Fahrenheit by the exhaust-steam. This heater consists of an outer and inner pipe, placed concentrically; the exhaust-steam being within the inner pipe and the feed-water being in the annular space between the two pipes.

The exhaust-steam after passing through the heater is thrown into the chimney of the boiler, and accelerates its draught.

The sides of the cylinders are felted and lagged, also all the steam-pipes.

The following are the principal dimensions of the engines, namely:

Number of cylinders.....	2.
Diameter of cylinders.....	6 $\frac{1}{4}$ inches.
Diameter of piston-rod.....	1 $\frac{1}{4}$ inches.
Stroke of pistons.....	8 inches.
Net area of both pistons, exclusive of piston-rods.....	70.574 square inches.
Space displacement of both pistons, exclusive of piston-rods...	564.592 cubic inches.
Clearance of the pistons.....	$\frac{3}{16}$ inch.
Length of steam-port.....	4 inches.
Breadth of steam-port.....	$\frac{1}{4}$ inch.
Area of steam-port.....	2 $\frac{1}{2}$ square inches.
Length of exhaust-port.....	4 inches.
Breadth of exhaust-port.....	$\frac{7}{8}$ inch.
Area of exhaust-port.....	3 $\frac{1}{4}$ square inches.
Space comprised in the clearances and passages of one end of both cylinders.....	26.4 cubic inches.
Number of crank-shaft journals.....	3.
Diameter of crank-shaft journals.....	2 $\frac{1}{4}$ inches.
Length of crank-shaft journals.....	3 $\frac{1}{4}$ inches.
Diameter of crank-pin journals.....	2 inches.
Length of crank-pin journals.....	2 inches.
Diameter of cross-head journals.....	1 $\frac{1}{4}$ inches.
Length of cross head journals.....	1 $\frac{1}{4}$ inches.
Area of main guide-gib.....	18.28 square inches.
Diameter of main connecting-rod in the necks.....	1 $\frac{3}{8}$ & 1 $\frac{5}{8}$ inches.
Length of main connecting-rod between centers of journals..	19 inches.
Diameter of feed-pump, (single-acting plunger).....	2 $\frac{1}{4}$ inches.
Stroke of feed-pump plunger.....	2 $\frac{1}{4}$ inches.
Width of eccentric-straps.....	$\frac{1}{4}$ inch.
Length, forward and aft the vessel, occupied by the engines..	36 inches.
Breadth, athwartship, occupied by the engines.....	27 inches.
Height of the engines above axis of crank-shaft.....	42 inches.
Number of thrust-collars on screw-shaft.....	5.
Projection of thrust-collars beyond screw-shaft.....	$\frac{7}{8}$ inch.
Thickness of thrust-collars on screw-shaft.....	$\frac{1}{4}$ inch.
Heating surface in feed-water heater.....	260 square inches.
Net weight of engines, including crank-shaft, but excluding everything else.....	1,400 pounds



## BOILER.

There is one boiler of the horizontal fire-tube type, with the tubes returned by the sides of the furnace.

The shell is a horizontal cylinder of 49 inches outside diameter, and 6 feet 6 inches extreme length, with flat ends. The front end is the front tube-plate for the tubes, and the uptake is of sheet-iron, made separately, and bolted to the front of the shell.

There is one furnace, and it is contained in a cylinder of 2 feet inner diameter, and 4 feet 11½ inches extreme length. In this cylinder are the grate-bars and the bridge-wall. The grate-bars are 4 feet 3 inches long, and the average breadth of the grate-surface is 1.96 feet.

The top of the grate-bars, at the front of the furnace, is one foot below the furnace-crown; and, at the back of the furnace, 1 foot 4 inches below this crown; the breadth of each grate-bar is  $\frac{7}{8}$  inch, and the width of the air-spaces between them is  $\frac{1}{2}$  inch. The least water-space between the furnace and the shell is at the bottom of the latter, and is 3 inches wide, including thicknesses of metal.

The opening for the furnace-door is a semicircle of 20 inches radius. The door is of wrought iron, hinged at the bottom and latched at the top. It has a perforated lining-plate for the distribution of air, and two registers for the admission of air above the incandescent fuel. The aggregate air-opening in the two registers is 13.5 square inches.

The bridge-wall is an iron casting faced with brick. Its top is 6 inches above the top of the grate-bars, and its width is 5 inches. The height from the crown of the furnace to the top of the bridge-wall is 10 inches.

The back smoke-connection has a flat top, a flat back, and a flat front. The sides and bottom are concentric with the boiler-shell, from which they are separated by a water-space 3 inches wide, including thicknesses of metal. The flat water-space between the back of the connection and the end of the shell is 3 inches wide, including thicknesses of metal. The extreme height of the connection in the clear is 29½ inches. The front of the connection is the back tube-plate of the tubes.

The tubes are returned along each side of the furnace, the top of the upper row being 3½ inches above the furnace-crown. The tubes are of iron, lap-welded. Six of them are 2½ inches in outside diameter, and the remaining fifty-four are 2 inches in outside diameter. Their metal is  $\frac{1}{16}$  of an inch in thickness. The tubes of each row, horizontally, are placed opposite the spaces between the tubes of the row, above and below. The least water-space between the tubes is  $\frac{1}{4}$  of an inch in the clear. The tube-plates are of  $\frac{1}{2}$ -inch thick metal, and the length of the tubes in the clear of the plates is 4 feet 10½ inches.

The uptake is a construction of sheet-iron separate from the boiler-shell, and bolted to it. The outer periphery is concentric with the boiler-shell, and the inner periphery is concentric with the furnace. The front projects over the fire-room 4½ inches at the bottom and 13 inches at the top. On this inclined surface are two uptake-doors opposite the tubes. They are hinged at the top and latched at the bottom, and are of sufficient area to embrace all the tubes. From the top of the uptake, (at the level of the top of the boiler-shell,) which is rectangular in horizontal section, the chimney is drawn in to a circle of 10½ inches inner diameter at the height of 20 inches above the top of the shell. At this height the upper cylindrical part, 4 feet 6 inches high, is hinged on. The chimney, for the whole height above the top of the shell, is surrounded by an air-jacket of 14½ inches outside diameter, perforated with a row of holes at top and bottom.

Immediately over the boiler-shell, and connected to it by a pipe of 8 inches diameter, is a boiler-plate cylinder with flat ends serving for steam-room additional to what the upper part of the shell contains. The inner diameter of this cylinder is 15 inches, and its inner length is 4 feet 11½ inches. It is of  $\frac{1}{4}$ -inch thick iron, and its upper part contains a dry-pipe, of 3 inches diameter, extending its whole length and perforated along the upper side. The steam-pipe to the engines is an extension of this dry-pipe. The hole in the top of the boiler-shell within the 8 inches diameter pipe is 4 inches diameter, and through it the steam passes to the cylindrical steam-room from the shell. The space between the top of the boiler-shell and the bottom of the cylinder is 3½ inches.

The cylindrical portion of the shell is of  $\frac{1}{4}$ -inch thick iron. Its flat ends, and the flat back of the smoke-connection, are of  $\frac{1}{2}$ -inch thick plate. All seams are double riveted.

In the front of the shell, opening into the uptake, is an elliptical man-hole with diameters of 11 and 14 inches. And in the lower portion of this front, beneath the uptake, are two elliptical hand-holes, with diameters of 2½ and 5 inches.

The entire exterior of the boiler-shell is felted, lagged, and covered with sheet-iron.

The following are the principal dimensions and proportions of the boiler :

Diameter of the shell.....	4 feet 1 inch.
Length of the shell proper.....	6 feet 6 inches.

Total length of the boiler, including uptake.....	7 feet 7 inches.
Number of furnaces.....	1
Breadth of grate-surface.....	1.96 foot.
Length of grate-bars.....	4 feet 3 inches.
Area of grate-surface.....	8.33 square feet.
Total number of tubes.....	60
Outside diameter of six of the above tubes.....	2½ inches.
Outside diameter of fifty-four of the above tubes.....	2 inches.
Length of all the above tubes, in clear of tube-plates.....	4 feet 10¼ inches
Diameter of the chimney.....	10½ inches.
Height of the chimney above the level of the grate-bars.....	14 feet 9 inches.
Water-room in the shell, up to 4 inches above tubes.....	36.7303 cubic feet.
Steam-room in the shell, above 4 inches above tubes.....	11.9404 cubic feet.
Steam-room in the additional cylinder and connecting-pipe....	6.1493 cubic feet.
Total steam-room.....	18.0897 cubic feet.
Cross area for draught over the bridge-wall.....	1.2370 square feet.
Cross area for draught through the tubes.....	1.0918 square feet.
Cross area of the chimney.....	0.6013 square feet.
Heating-surface in the furnace.....	16.6736 square feet.
Heating-surface in the back smoke-connection.....	25.2137 square feet.
Heating-surface in the tubes, calculated for their inner circum- ference.....	140.3494 square feet.
Heating-surface in the uptake.....	3.4290 square feet.
Total water-heating surface.....	185.6657 square feet.
Steam-superheating surface in the uptake.....	2.5153 square feet.
Ratio of the water-heating to the grate surface.....	22.289 to 1.000
Ratio of the steam-superheating to the grate surface.....	0.266 to 1.000
Ratio of the grate-surface to the cross area over the bridge-wall.	6.734 to 1.000
Ratio of the grate-surface to the cross area through the tubes.	7.630 to 1.000
Ratio of the grate-surface to the cross area of the chimney ...	13.853 to 1.000
Weight of the boiler, including grate-bars, bearers, chimney, and all doors and plates.....	5,050 pounds.
Weight of water in the boiler.....	2,290 pounds.

#### SPACE OCCUPIED IN THE VESSEL BY THE MACHINERY, AND ITS WEIGHT.

The length in the vessel occupied by the machinery, including the fire-room, feed-water tanks, and coal-bunker, is 19 feet 8 inches. The feed-water tanks are placed along each side of the engines and boiler, so that the entire breadth of the vessel is occupied by the machinery and its appendages. The coal-bunker is forward of the boiler.

The weights of the machinery are as follows, namely:

	Pounds.
Net weight of the engines proper, including crank-shaft, but excluding piping, flooring, &c.....	1,400
Weight of the stern-bearing pipe in dead-wood, and the dead-wood stuffing-box.....	141
Weight of the line-shafting and its couplings.....	590
Weight of the screw-propeller.....	250
Weight of all the piping.....	150
Weight of the boiler, including grate-bars, bearers, chimney, and all doors and plates.....	5,050
Weight of the water in the boiler.....	2,290
Weight of the felt, lagging, gum, putty, and paint on the engines and boiler.....	129
Total weight of machinery.....	10,000
Weight of feed-water carried in tanks.....	8,500
Weight of feed-water tanks.....	3,200
Weight of coal carried in bunker.....	4,500
Weight of coal-bunker.....	600
Total weight of feed-water and its tanks, and of coal and its bunker.	16,800
Total weight of all objects in the engineer department..... or 12 tons.	26,800

## SCREWS.

The different screws employed in these experiments are of brass, and will be designated by letters. They are all of the same diameter, and have the same diameter of hub, except the Griffith screw H.

Screws A, C, E and F, were formed in the following manner: Two true screws were very carefully swept up in the sand by the same moulder from the same iron guides, and were cast of the same metal at the same time. Each of these screws has two blades, one opposite the other, and is  $5\frac{1}{2}$  inches long in the direction of its axis. The pitch is uniform, and, by accurate measurement of the screws after they were cast, 5.136 feet. If the blades are viewed in projection on a plane parallel to the axis, their forward and after edges are parallel to each other and at right angles to the axis. The outboard end of the screw-shaft was made to receive both screws at the same time, one being placed immediately in front of the other and touching, so that by bringing the after edge of the blades of the forward screw to coincide with the forward edge of the blades of the after screw, the propelling surfaces of both screws would be continuous, and they would thus form one two-bladed screw A, 11 inches long in the direction of the axis. Or, the blades of the after screw could be placed immediately behind those of the forward screw, in the direction of the axis, and they would thus form the Mangin screw F, 11 inches long in the direction of the axis. Or, the blades of the forward screw could be placed at right angles to those of the after screw, and thus form the four-bladed screw E,  $5\frac{1}{2}$  inches long in the direction of the axis; for the fact that the blades of the after screw are recessed, as it were,  $5\frac{1}{2}$  inches back of those of the forward screw, does not affect the results in the slightest degree, and the screw was the same as though the four blades had been on the same hub of  $5\frac{1}{2}$  inches length. Or, one of the screws could be used alone, when it was the two-bladed screw C,  $5\frac{1}{2}$  inches long in the direction of the axis.

After the completion of the experiments with the screws formed as above described, one of them was cut through at right angles to the axis, so as to leave it  $3\frac{1}{2}$  inches long in the direction of the axis and make the two-bladed screw D.

By using screw D in connection with screw C, bringing their propelling surfaces to be continuous, the two-bladed screw B was formed  $8\frac{1}{2}$  inches long in the direction of the axis.

It will thus be seen that all the screws from A to F, both inclusive, are composed of exactly the same physical surface, governed by the same co-efficient of friction on the water, and have exactly the same helicoidal form; the results from them are, therefore, free from the doubt which attends trials of screws having different physical surfaces, and, consequently, possibly different helicoidal forms, and different co-efficients of friction, though intended to be exactly the same.

Screw G is a three-bladed screw, with a pitch expanding gradually from 6 feet 6 inches at the forward edge of the blades, to 7 feet 6 inches at the after edge, making the mean pitch 7 feet, which it had by close measurement. The length of the blades, in the direction of the axis, at the periphery of the screw, is 7 inches; gradually increasing thence to 11 inches length, in the direction of the axis, at the radius of 19 inches; from which point it gradually decreases to 6 inches length, in the direction of the axis, at the hub. When the blades are viewed in projection on a plane parallel to the axis of the screw, their forward edge is nearly perpendicular to the axis. If the most forward part of this edge is made to touch this perpendicular, the contact will be at 19 inches radius, from which point the forward edge of the blade curves gradually back until it is, at the hub and at the periphery,  $1\frac{1}{2}$  inch from the perpendicular. The thickness of the blade just above the tillet joining it to the hub, is  $1\frac{1}{2}$  inch at the center. The weight of the screw is 250 pounds.

Screw H is a three-bladed Griffith screw, formed by trimming the blades of screw G into the Griffith shape, and bolting between them a hub made of wood, to the figure of the frustum of a sphere 15 inches in diameter and 11 inches in height. This hub was well smoothed, painted, and varnished; its diameter is 0.28846 of the diameter of the screw, and both ends are flat and circular. The length of the blades, in the direction of the axis, at the periphery of the screw, is  $3\frac{1}{2}$  inches, whence they curve gradually outward to the length of 11 inches, in the direction of the axis, at the radius of 19 inches, from which point they curve gradually inward to the hub, at which the length is  $7\frac{1}{2}$  inches in the direction of the axis. When the blades are viewed in projection on a plane parallel to the axis of the screw, they are pear-shaped, and the forward and after edges are arranged symmetrically on both sides of a perpendicular to the axis passing through the center of the blades. The pitch expands gradually from 6 feet 8 inches at the forward edge of the blade, to 7 feet 4 inches at the after edge, making the mean pitch 7 feet. The fraction used of the pitch in function of the surface and of the propelling efficiency of the surface is 0.24.

In the following table will be found the principal dimensions of the screws: For screws G and H, the mean pitch only is given, and the slip is always calculated for it. For these screws, too, the length given is the greatest length of the blades in the direction of the axis.

Table containing the principal dimensions of the screws employed in the following experiments.

Designation of the screw.	Diameter, in feet.	Diameter of hub, in feet.	Pitch, in feet.	Number of blades.	Length of each blade in direction of axis, in feet.	Fraction used of the pitch.	Projected area of the blades, on a plane at right angles to axis, in square feet.	Helicoidal area of the blades, in square feet.
A.....	4. 3333	0. 50	5. 136	2	0. 9167	0. 3570	5. 1950	6. 1321
B.....	4. 3333	0. 50	5. 136	2	0. 7187	0. 2799	4. 0730	4. 7074
C.....	4. 3333	0. 50	5. 136	2	0. 4583	0. 1785	2. 0975	3. 0661
D.....	4. 3333	0. 50	5. 136	2	0. 2604	0. 1014	1. 4755	1. 7417
E.....	4. 3333	0. 50	5. 136	4	0. 4583	0. 3570	5. 1950	6. 1321
F*.....	4. 3333	0. 50	5. 136	4	0. 4583	0. 3570	5. 1950	6. 1321
G.....	4. 3333	0. 50	7. 000	3	0. 9167	0. 3446	5. 0140	6. 5520
H†.....	4. 3333	1. 25	7. 000	3	0. 9167	0. 2034	2. 7495	4. 2968

\* Mangin screw.

† Griffith screw.

## MANNER OF MAKING THE EXPERIMENTS.

Before commencing the experiments, a very excellent dynamometer was constructed and applied to the screw-shaft for the purpose of measuring the thrust of the screw. It consisted of a single vertical-lever, stiff enough not to spring under a considerably greater pressure than the screw was capable of giving, bearing by knife-edges of steel against a brass ring free to move on guides in the direction of the screw-shaft, and having a turned recess in which was a loose brass ring carrying *lignum-vitæ* plugs or cylinders projecting beyond both sides of the loose ring; both ends of the plugs are bearing-surfaces, and are flat and at right angles to the grain of the wood. These surfaces were kept flooded with oil during the trials. The knife-edges bore against pieces of steel let into the movable brass ring.

The thrust of the screw was delivered against the *lignum-vitæ* plugs by a brass collar secured upon the screw-shaft abaft the regular thrust-collars. There were no collars on the screw-shaft abaft the dynamometer.

The guides of the movable brass ring carrying the loose ring in which the *lignum-vitæ* plugs were inserted, were two steel pins, one on each side of the shaft, fitting into holes of a little larger diameter bored through lugs cast upon the ring.

An accurately graduated steel spiral spring was attached to the upper end of the lever, which end also carried a pencil that traced the line of pressures continuously on a sheet of paper secured around a horizontal large diameter revolving-drum which received its motion from the screw-shaft through worm-wheels and worms. The lower end of the dynamometer lever, the other end of the spiral spring, and the guides of the movable brass ring, were, of course, attached firmly to the vessel. The ratio of the length of the vessel-arm of the lever to the length of the spring-arm, was 1 to 11. The dynamometer-diagram thus obtained, gave the thrust-pressures for every instant during each run of the vessel.

Two indicators were used: one of them was kept permanently in position on one cylinder, and the other on the other cylinder, during the experiments. Each indicator communicated with both ends of its cylinder, and before use was put in perfect adjustment, and had its spring tested.

A counter was attached to the screw-shaft, and registered the number of its revolutions.

The base for the experiments, or the course passed over by the vessel during each run, was a straight line 8,955 feet long, as given by the very accurate survey of Mare Island. It extended from the northern side of the dry-dock dolphins, or guard piers, to the northern side of the magazine wharf. This base was close under the lee of the high ground of the island, the wind over which was always in the same direction, exactly at right angles to the base; and the water smooth.

During all the trials, the variation in the vessel's draught of water, and in the trim, was very slight. The velocity of the tide varied from nil to three geographical miles per hour.

With each screw eight experiments were made at the speeds, respectively, of 5, 5½, 6, 6½, 7, 7½, 8, and 8½ geographical miles per hour, as nearly as could be obtained. Each experiment consisted of six runs over the base, three in each direction, and the time of making them was selected when the tide had but little influence. The vessel's speed through the water during each double run was not only ascertained from the ranging marks at the ends of the base, but by means of a mercurial speed-gauge consisting of Berthon's modification of Pitot's tube.



This gauge was composed of a glass tube bent into the U-form; the ends of the tube were open, and the curved portion and a portion of the legs were filled with mercury. The top of each leg communicated by a gum pipe with the bottom of a separate air-chamber, and the top of each chamber communicated by another gum pipe with the upper portion of a brass tube closed at both ends. One of these brass tubes was placed within the other, the inner tube passing a few inches through the ends of the outer one by stuffing-boxes. The upper ends of the brass tubes were inside the vessel, and their lower ends protruded about 6 inches below the bottom of the vessel, 12 inches from the nearest side of the keel, and at about the middle of the vessel's length. The inner tube was the pressure-tube, and its interior received the pressure of the water through a hole of  $\frac{1}{2}$  of an inch diameter in its side, a little above its bottom, and in the directly ahead direction of the vessel. The larger tube was the neutral tube, and in its side, a little above its bottom, was a hole of  $\frac{1}{2}$  of an inch diameter with its axis at the angle of  $41\frac{1}{2}$  degrees from the directly ahead direction. The diameter of the outer brass tube was 1 inch, and of the inner brass tube  $\frac{3}{4}$  of an inch. A properly graduated scale being attached to the legs of the glass tube, measured by the difference of the level of the mercury in those legs, the vessel's speed in geographical miles per hour. When the vessel was motionless in still water, the mercury in the two legs stood at the same level. The vessel's speed by this gauge in a calm and at dead high or low water, being frequently compared with its speed at the same time according to the shore-marks, was always found to exactly correspond.

In making the experiments, the vessel, at the intended speed, was brought opposite one end of the base and then run uniformly to the other, being kept in a straight line by an expert steersman. After passing the last end of the base a sufficient distance, the vessel was turned and the run repeated back in the same manner. The throttle-valve was always carried wide open, during the turnings as well as during the runs, and the steam-pressure varied but slightly throughout an experiment, the supply of steam required being always within the capacity of the boiler to furnish.

From the commencement of each run to its end, indicator-diagrams were taken as rapidly as possible from each end of each cylinder. The assistant engineers charged with this duty being very expert, and having the pencils and paper all previously prepared, the diagrams were taken with so little interval of time, that they may be considered continuous. The dynamometer-diagram, taken by another engineer, was continuous from the beginning to the end of the run.

An observer stationed always at the same part of the vessel, gave the signal the instant he was opposite the ranges at the ends of the base; and, at the same moment, two other observers took, one the time to a second, and the other the number on the counter. Thus, the time of making each run, and the number of revolutions made by the screw in that time, were exactly ascertained.

During each run, an observer noted at the end of each half minute the vessel's speed through the water, by the speed-gauge; and at the end of every minute the steam-pressure in the boiler, as given by a spring-gauge. There were also noted during each run, the temperatures of the external atmosphere, of the engine-room, of the feed-water entering the boiler, and of the sea-water: also, the atmospheric pressure as given by an aneroid barometer. Every care was observed in the conduct of the experiments to insure extreme accuracy. Although many of the quantities noted were not necessary to the main purpose of the experiment, yet the results from them are interesting in other points of view.

*Explanation of tables 1 to 6, both inclusive, containing the data and results of the experiments made with screws A, B, C, D, E, F, G, and H, to determine their relative economic efficiencies.*

In the following tables, numbered 1 to 6, both inclusive, will be found the data and results of all the experiments made with screws A, B, C, D, E, F, G, and H, to determine their relative economic efficiencies when applied to the propulsion of steam-launch No. 4. For facility of reference, the lines containing the quantities are numbered and arranged in groups; and the columns containing the data and results for the different speeds of vessel at which the experiments were made are lettered.

These quantities were obtained, for each screw, in the following manner, namely:

On a straight line, taken for a base, all the experimental speeds of the vessel were laid off by scale as abscissæ, and on ordinates erected from these abscissæ, at right angles to the base, were laid off, by scale, the corresponding experimental slips of the screw. A fair curve was then passed through the ends of these ordinates, dividing them as equally as possible. Finally, there were laid off, by scale on the base, abscissæ representing the speeds of vessel given in line 1 of the table; and from these abscissæ right-angled ordinates were erected until they cut the curve, and on them were measured by scale the distances between the curve and the base, which distances gave the true slips of the screw, as shown in line 2 of the tables, and corresponding to the speeds of vessel shown in line 1. The speeds in line 1 are given in geographical

miles of 6,086 feet per hour, increasing for each column of the tables by one-half a geographical mile per hour, commencing in column *a* with 5.0 geographical miles per hour, and ending in column *h* with 8.5 geographical miles. The slip of the screw is expressed in per centum of its speed; the latter being measured by the product of its pitch and of the number of its revolutions made in a given time. The speed of the vessel in the same terms being deducted from the speed of the screw thus obtained, the remainder, expressed in per centum of the latter, is the quantity on line 2. In screws G and H, having expanding pitches in the direction of their axes, the mean pitch is used in all calculations.

From the quantities on lines 1 and 2, that on line 5 is calculated in the following manner:

Let—

A = speed of vessel in feet per hour, (line 1.)

B = slip of the screw in per centum of its speed, (line 2.)

C = pitch of the screw in feet.

Then—

$$\frac{A - 1 - B}{C \times 1440}$$

= The number of double strokes of engines' pistons, and of revolutions of the screw, made per minute, given on line 5.

The quantities on lines 6 to 12, both inclusive, grouped under the head of "Distribution of the indicated pressure on the pistons," are obtained from the indicator-diagrams in the following manner:

These diagrams were taken as rapidly as possible by expert assistants from each end of each cylinder; and the average mean pressure from all of them for each experiment ascertained. From this mean pressure and the average experimental number of double strokes of engines' pistons made per minute during the experiment, was calculated the gross effective horses-power developed, during the experiment, by the engines. The distribution of this power, for each experiment, was then determined as follows: taking, for example, the experiment in table No. 1, column *a*, in which the gross effective horses-power developed by the engines, (line 13) was 6.6847:

The pressure required to work the engines and shafting, being, by direct experiment, 2 pounds per square inch of piston, (line 7,) and constant for all speeds, the power thus absorbed is (line 14) 0.6109 horse.

Deducting from the gross effective power of 6.6847 horses developed by the engines, this power of 0.6109 horse, there remains the net power of 6.0738 horses (line 15) applied to the shaft, of which  $7\frac{1}{2}$  per centum, or 0.4555 horse, (line 16) is absorbed by the friction of the load.

The power expended in overcoming the cohesive resistance of the water by the screw-blades, calculated in the ratio of the square of the velocity, and for a value of 0.45 pound avoirdupois per square foot of helicoidal surface moving in its helical path with a velocity of 10 feet per second, amounts to 0.3598 horse, (line 17.)

The powers (0.4555 and 0.3598 horse) absorbed by the friction of the load and expended in overcoming the cohesive resistance of the water by the screw-blades, being deducted from the power (6.0738 horses) applied to the shaft, there remains 5.2585 horses-power expended in the slip of the screw and in the propulsion of the hull. And, as the slip of the screw is 7.82 per centum of its speed, (line 2,) the power expended in it is  $(5.2585 \times .0782 =)$  0.4112 horse, (line 18,) leaving  $(5.2585 - 0.4112 =)$  4.8473 horses (line 19,) expended in the propulsion of the simple hull.

The quantity on line 19 is the same as that on line 4, and from it the thrust of the screw in pounds can easily be calculated.

Let—

A = the number of horses-power expended in the propulsion of the simple hull

B = the speed of the vessel in feet per minute.

Then—

$$\frac{A \times 33000}{B} = \text{the thrust of the screw in pounds.}$$

In this manner the quantity on line 3 is calculated from that on line 4 or line 19 for the speeds of vessel in the different columns of the tables.

The quantities on lines 20, 21, 22, and 23 are simply the per centum which the quantities on lines 16, 17, 18, and 19 are respectively of the quantity on line 15.

The quantities on lines 6 to 12, both inclusive, are calculated, respectively, from the quantities on lines 13 to 19, both inclusive, using the areas of the pistons, and the speed of piston in feet per minute deduced from the quantity on line 5.

During the entire time of each experiment a dynamometer-diagram was taken, and the mean pressure obtained from it and multiplied by the leverage of the instrument is the same as found on line 3. From this pressure the quantity on line 4 is obtained by multiplying it by the speed of the vessel in feet per minute and dividing by 33,000.

The difference between the thrusts of the screws, as given directly by the dynamometer, and indirectly by the indicator, was very small, as will be seen from the fact that



their sum by the dynamometer was 22,142, and by the indicator 22,203, the difference of which is only 0.275 per centum of the larger quantity.

After the experimental thrusts of all the screws in all the experiments were ascertained, both directly by the dynamometer and indirectly by the indicator, as above described, for the experimental speeds of the vessel, the latter were laid off, by scale, on a straight base-line as abscissæ. From these abscissæ right-angled ordinates were erected, on which the corresponding experimental thrusts of the screws were laid off, by scale, and a fair curve passed among their ends so as to equally divide them, leaving as many on one side the curve as on the other. Then there were laid off, by scale, on the base, abscissæ representing the speeds of the vessel given in line 1 of the tables; and from these abscissæ right-angled ordinates were erected until they cut the curve, and on them were measured, by scale, the distances between the curve and the base, which distances gave the true thrusts of the screw, as shown on line 3 of the tables, and corresponding to the speeds of vessel shown on line 1. These thrusts are expressed in pounds avoirdupois.

Table No. 1, containing the results of the experiments made with screws A, E, and F, all having the same diameter, 4½ feet; the same uniform pitch, 5.136 feet; the same fraction of the pitch, 0.3570, and the same quantity and kind of surface, but differing in the number and arrangement of the blades. Screw A has two blades, one directly opposite the other; screw E has four blades, in two pairs, at right angles to each other; and screw F is a Mangin screw, with two pairs of directly opposite blades, one pair immediately behind the other.

No. of line.	a	b	c	d	e	f	g	h
1	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	7.82	8.37	8.87	9.40	10.10	11.56	13.33	14.57
3	315.4	362.8	449.9	560.6	707.0	887.1	990.7	1,082.4
4	4.8473	6.2348	8.2878	11.2004	15.2110	19.9253	24.3612	28.2798
5	107.1347	118.5443	130.0306	141.6805	153.7779	167.4620	182.8959	196.5007
DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	21.8838	25.3212	30.4249	37.3312	46.3383	56.2773	64.1455	70.1537
7	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	19.8838	23.3212	28.4249	35.3312	44.3383	54.2773	62.1455	68.1537
9	1.4913	1.7491	2.1319	2.6498	3.3254	4.0706	4.6809	5.1115
10	1.1771	1.4436	1.7568	2.0796	2.4998	2.8767	3.4112	3.9665
11	1.3461	1.6838	2.1773	2.6972	3.2974	3.8712	4.6078	5.0078
12	15.0603	18.4447	22.3789	27.7944	34.6867	41.8506	46.8630	50.4679
DISTRIBUTION OF THE ENGINE-POWER.								
13	6.0947	8.5592	11.2203	15.0928	20.3195	26.8764	33.3436	39.3083
14	0.6109	0.6761	0.7416	0.8061	0.8770	0.9551	1.0396	1.1206
15	6.0738	7.8831	10.5387	14.2747	19.4425	25.9213	32.3040	38.1677
16	0.4553	0.5912	0.7904	1.0706	1.4582	1.9441	2.4228	2.8641
17	0.3394	0.4876	0.6435	0.8326	1.0644	1.3751	1.7732	2.2209
18	0.4112	0.5695	0.8076	1.1711	1.7030	2.6126	3.7468	4.8231
19	4.8473	6.2348	8.2872	11.2004	15.2110	19.9253	24.3612	28.2798
20	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	5.92	6.19	6.11	5.83	5.46	5.30	5.49	5.62
22	6.77	7.12	7.66	8.20	8.79	10.08	11.60	12.63
23	79.61	79.09	78.73	78.47	78.23	77.13	75.41	74.05

Table No. 2, containing the results of the experiments made with screw II, having the diameter 4½ feet, the uniform pitch 5.136 feet, two blades directly opposite each other, and the fraction of the pitch 0.2719.

No. of line.	a	b	c	d	e	f	g	h
1	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	8.74	9.35	9.90	10.49	11.26	12.16	14.21	16.15
3	315.4	368.8	449.9	560.6	707.0	867.1	990.7	1,082.4
4	4.8473	6.2344	8.2872	11.2004	15.2110	19.9683	24.3612	28.9796
5	104.2066	119.8272	131.5226	143.4137	155.7867	169.0660	185.4624	200.8043
DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	91.4659	24.8112	29.8120	36.5231	45.4697	55.5001	62.9729	68.6945
7	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	19.4659	22.8112	27.8120	34.5231	43.4697	53.5001	60.9729	65.6945
9	1.4599	1.7106	2.0459	2.5637	3.3617	4.3945	5.5730	5.9171
10	0.7903	0.9718	1.1841	1.5092	1.9304	2.5446	3.3892	3.8029
11	1.5047	1.8819	2.4335	3.2083	4.3446	6.0717	8.0057	9.5392
12	15.7110	18.9467	22.1245	27.3699	34.9438	41.2203	46.0640	49.5353
DISTRIBUTION OF THE ENGINE-POWER.								
13	6.6234	8.4776	11.1905	14.9603	20.9675	28.7952	33.3026	39.3203
14	0.6171	0.6834	0.7501	0.8179	0.8864	0.9694	1.0577	1.1420
15	6.0063	7.7942	10.4394	14.1424	19.3191	25.8158	32.9449	39.1883
16	0.4595	0.5845	0.7523	1.0006	1.4489	1.9302	2.4184	2.8041
17	0.2443	0.3318	0.4327	0.5648	0.7291	0.9472	1.2202	1.5578
18	0.4642	0.6431	0.9122	1.3126	1.9301	2.9431	4.2351	5.4468
19	4.8473	6.2344	8.2872	11.2004	15.2110	19.9683	24.3612	28.9796
20	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	4.06	4.36	4.90	4.02	3.77	3.67	3.62	4.19
22	7.73	8.25	8.75	9.28	9.09	11.40	12.13	14.26
23	20.71	29.99	39.55	49.90	62.74	77.43	95.55	114.85

Table No. 3, containing the results of the experiments made with screw C, having the diameter 41 feet, the uniform pitch 5.136 feet, two blades directly opposite each other, and the fraction of the pitch 0.1785.

No. of line.	a	b	c	d	e	f	g	h
1	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	10.43	11.16	11.83	12.54	13.47	14.42	15.78	16.43
3	315.4	362.8	440.9	560.6	707.0	867.1	990.7	1092.4
4	4.8473	6.2348	8.2972	11.2704	15.2110	19.9893	24.3612	28.7796
5	110.2455	122.4842	134.3852	146.7752	159.7246	175.1186	192.2566	208.3610
DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	Mean	21.2074	22.5542	23.9747	25.4418	26.9683	28.4379	29.8274
7	Pressure	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	Net pressure	19.2074	20.5542	21.9747	23.4418	24.9683	26.4379	27.8274
9	Pressure	1.4406	1.6916	2.0631	2.5256	3.1951	4.5338	4.9670
10	Pressure	0.6204	0.7714	0.9297	1.1717	1.5755	1.8977	2.2253
11	Pressure	1.7882	2.2419	2.9072	4.0391	7.2956	9.5734	11.4706
12	Pressure	15.3582	17.8493	21.0816	26.3233	40.0319	44.4340	47.5646
DISTRIBUTION OF THE ENGINE-POWER.								
13	Absolute:	6.6912	6.5765	11.3929	15.1819	27.3983	34.2286	40.5649
14	Gross-effective horse-power developed by the engines.	0.6297	0.6286	0.7664	0.8770	0.9987	1.0964	1.1883
15	Horse-power expended in working the engines, per se.	6.0615	7.8779	10.5575	14.3049	26.3996	33.1334	39.3766
16	Net horse-power applied to the shaft.	0.4547	0.5908	0.7918	1.0759	1.4737	2.4630	2.9582
17	Horse-power absorbed by the friction of the load.	0.1961	0.2691	0.3553	0.4628	0.7860	1.0401	1.3210
18	Horse-power expended in overcoming the cohesive resistance of the water, by the screw-blades.	0.5044	0.7832	1.1132	1.6038	3.4443	5.2471	6.8199
19	Horse-power expended in the propulsion of the vessel.	4.8473	6.2348	8.2972	11.2704	19.9893	24.3612	28.7796
20	Proportional:	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	Per centum of the net power applied to the shaft, absorbed by the friction of the load.	1.23	3.43	3.37	3.23	2.80	3.14	3.30
22	Per centum of the net power applied to the shaft, expended in overcoming the cohesive resistance of the water, by the screw-blades.	9.31	9.94	10.54	11.19	13.80	15.64	17.32
23	Per centum of the net power applied to the shaft, expended in the propulsion of the vessel.	79.96	79.14	73.59	78.06	73.72	73.52	71.62

Table No. 4, containing the results of the experiments made with screws *P*, having the diameter 34 feet, the uniform pitch, 5.136 feet, two blades directly opposite each other, and the fraction of the pitch 0.1014.

No. of line.	a	b	c	d	e	f	g	h
1	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	13.01	13.03	14.76	15.64	16.60	17.63	18.71	19.84
3	315.4	308.8	449.9	540.6	707.6	867.1	1042.4	1231.4
4	4.8473	6.2148	8.2972	11.2004	15.2110	19.9893	24.3612	28.2796
5	113.5172	126.2550	139.0130	151.8317	166.1714	183.3545	203.0254	221.0264
DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.								
6	Mean	24.2631	29.1565	35.8218	44.5812	54.2537	61.7576	67.5049
7	Present	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	Net pr	19.0168	22.2631	27.1565	33.5818	52.2537	59.7576	65.5049
9	Present	1.4282	1.6703	2.0367	2.5411	3.9175	4.4818	4.9177
10	Present	0.3765	0.4654	0.5649	0.6709	0.9629	1.2011	1.3801
11	Present	2.2402	2.8037	3.6254	4.7977	9.1043	11.9933	14.0317
12	Present	14.9737	17.3204	20.9205	25.6721	38.2399	43.0214	45.2294
DISTRIBUTION OF THE ENGINE-POWER.								
13	Absolute.	6.8029	8.7172	11.5574	15.5338	21.1241	25.7328	42.5858
14	Gross-effective horse-power developed by the engines.	0.6474	0.7240	0.7988	0.8658	0.9467	1.0378	1.2305
15	Horse-power expended in working the engines, per se.	6.1555	8.0122	10.7645	14.6680	20.1774	24.6950	41.3553
16	Net horse-power applied to the shaft.	0.4017	0.4889	0.5973	1.001	1.5133	2.0462	3.0994
17	Horse-power absorbed by the friction of the load.	0.1216	0.1674	0.2234	0.2910	0.3816	0.4959	0.6180
18	Horse-power expended in the slip of the screw.	0.7249	1.0091	1.4367	2.0765	3.0715	4.7591	7.0483
19	Horse-power expended in the propulsion of the vessel.	4.6473	6.2316	8.2972	11.2004	15.2110	19.9893	24.3612
20	Proportional:							
21	Per centum of the net power applied to the shaft, absorbed by the friction of the load.	7.50	7.50	7.50	7.50	7.50	7.50	7.50
22	Per centum of the net power applied to the shaft, expended in overcoming the cohesive resistance of the water, by the slip of the screw.	1.98	2.09	2.03	1.93	1.89	2.01	2.12
23	Per centum of the net power applied to the shaft, expended in the propulsion of the vessel.	11.78	12.50	17.35	14.16	15.22	20.07	21.40
24	Per centum of the net power applied to the shaft, expended in the propulsion of the vessel.	78.74	77.82	77.07	76.36	73.30	70.42	68.43

Table No. 5, containing the results of the experiments made with screw G, having the diameter 4½ feet, a pitch expanding in the direction of the axis from 6½ feet to 7½ feet, three blades, and the fraction of the pitch 0.3446.

No. of line.		a	b	c	d	e	f	g	h
1	Speed of the vessel	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
2	Slip of the screw	9.89	10.58	11.23	11.89	12.77	14.63	16.89	18.48
3	Thrust of the screw	315.4	383.8	449.9	500.6	707.0	867.1	990.7	1082.4
4	Horse-power, $\frac{1}{2}$	4.8473	6.2348	8.9972	11.9004	15.2110	19.1893	24.3612	28.9798
5	Double-strokes, 1 screw, made per minute.	80.4029	89.1864	97.9321	106.9028	116.8682	127.3085	139.4847	151.0632
DISTRIBUTION OF THE INDICATED PRESSURE ON THE PISTONS.									
6	Mean gross-effective pressure on the pistons, in pounds per square inch	29.5351	34.3863	41.2060	50.7584	63.2041	76.9494	87.9421	96.4138
7	Pressure required to work the engines, $\frac{1}{2}$ , in pounds per square inch of pistons	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
8	Net pressure applied to the shaft, in pounds per square inch of pistons	27.5351	32.3863	39.2060	48.7584	61.2041	74.9494	85.9421	94.4138
9	Pressure absorbed by the friction of the load, in pounds per square inch of pistons	2.0631	2.4245	2.9449	3.6569	4.5863	5.6312	6.4457	7.0810
10	Pressure expended in overcoming the cohesive resistance of the water by the screw-blades, in pounds per square inch of pistons	2.0068	2.4683	2.8537	3.4006	4.0860	4.8276	5.8003	6.6088
11	Pressure expended in the slip of the screw, in pounds per square inch of pistons	2.3205	2.9027	3.7550	4.9583	6.7155	9.4364	12.4473	14.8607
12	Pressure expended in the propulsion of the vessel, in pounds per square inch of pistons	21.1427	24.5328	29.7124	36.7427	45.8723	55.0042	61.2468	65.8427
DISTRIBUTION OF THE ENGINE-POWER.									
Absolute									
13	Gross-effective horse-power developed by the engines	6.7714	8.7238	11.5236	15.4728	20.9481	27.9340	34.9720	41.5359
14	Horse-power expended in working the engines, $\frac{1}{2}$	0.4585	0.5043	0.5385	0.6097	0.6673	0.7360	0.7955	0.8616
15	Net horse-power applied to the shaft	6.3129	8.2195	10.9851	14.8631	20.2809	27.2040	34.1765	40.6743
16	Horse-power absorbed by the friction of the load	0.4735	0.6162	0.6224	1.1147	1.5241	2.0406	2.5637	3.0506
17	Horse-power expended in overcoming the cohesive resistance of the water by the screw-blades	0.4601	0.6368	0.7963	1.0366	1.3350	1.7385	2.3070	2.9353
18	Horse-power expended in the slip of the screw	0.5320	0.7377	1.0486	1.5114	2.2868	3.4256	4.9506	6.4108
19	Horse-power expended in the propulsion of the vessel	4.8173	6.2345	8.2972	11.2004	15.2110	19.9683	24.3612	28.9798
Proportional:									
20	Per centum of the net power applied to the shaft, absorbed by the friction of the load	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
21	Per centum of the net power applied to the shaft, expended in overcoming the cohesive resistance of the water, by the screw-blades	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
22	Per centum of the net power applied to the shaft, expended in the slip of the screw	8.43	8.98	9.56	10.17	10.97	12.59	14.48	15.76
23	Per centum of the net power applied to the shaft, expended in the propulsion of the vessel	76.78	75.89	74.67	75.30	74.95	73.47	71.97	69.53





DISCUSSION OF THE RESULTS OF THE EXPERIMENTS IN THE PRECEDING TABLES.

*Of the resistance of the hull at different speeds.*—In the following table will be found the experimental resistances of the hull in pounds, for speeds varying by 0.1 geographical mile per hour between the speeds of 5.0 and 8.5 geographical miles per hour, both inclusive, and the ratio of these resistances as compared with the ratio of the squares of the respective speeds :

Speeds of the vessel in geographical miles per hour.	Squares of the speeds of the vessel, pro- portionally.	Resistances of the vessel at the different speeds.		Speeds of the vessel in geographical miles per hour.	Squares of the speeds of the vessel, pro- portionally.	Resistances of the vessel at the different speeds.	
		In pounds avoirdupois.	Proportion- ally.			In pounds avoirdupois.	Proportion- ally.
5.0	1.0000	315.4	1.0000	6.8	1.8496	644.7	2.0441
5.1	1.0404	323.3	1.0250	6.9	1.9044	676.3	2.1443
5.2	1.0816	333.2	1.0364	7.0	1.9600	707.0	2.2416
5.3	1.1236	344.1	1.0910	7.1	2.0164	739.6	2.3450
5.4	1.1664	356.0	1.1287	7.2	2.0736	773.2	2.4515
5.5	1.2100	368.8	1.1693	7.3	2.1316	805.8	2.5549
5.6	1.2544	380.7	1.2070	7.4	2.1904	836.5	2.6522
5.7	1.2996	397.5	1.2603	7.5	2.2500	867.1	2.7492
5.8	1.3456	414.3	1.3136	7.6	2.3104	895.8	2.8462
5.9	1.3924	431.1	1.3668	7.7	2.3716	920.5	2.9125
6.0	1.4400	449.9	1.4264	7.8	2.4336	946.3	3.0003
6.1	1.4884	470.7	1.4924	7.9	2.4964	967.0	3.0659
6.2	1.5376	490.4	1.5548	8.0	2.5600	990.8	3.1414
6.3	1.5876	513.2	1.6271	8.1	2.6244	1009.5	3.2007
6.4	1.6384	536.9	1.7023	8.2	2.6896	1027.3	3.2571
6.5	1.6900	560.6	1.7774	8.3	2.7556	1043.2	3.3076
6.6	1.7424	587.3	1.8621	8.4	2.8224	1057.0	3.3513
6.7	1.7956	616.0	1.9531	8.5	2.8900	1082.4	3.4313

During the experiments, it was remarked that the vessel's "trim," or her relative draught of water forward and aft, varied with every variation of speed, the bow rising and the stern falling as the speed increased. At the maximum speeds, the variation of the draught of water forward and aft was excessive. By this continual change of trim as the speed changed, the immersed solid of the hull was continually changing in form. Strictly, there was a succession of vessels, instead of the same vessel, at different speeds; and the resistances in the above table show, in reality, not the resistance of the same immersed solid at different speeds, but the resistances of immersed solids differing more or less from each other with every change of speed. The results of the experiments show that the resistance of these different immersed solids varied widely from the law of its proportionality to the squares of their speeds, increasing with increased speed sometimes less rapidly and sometimes more rapidly than due to that law, according as the actual immersed solid varied more or less favorably in function of resistance. To show this effect quantitatively, there has been placed in the following table, opposite the column of the vessel's speed, another containing the amount by which the resistance varied from the law of the squares, that amount being expressed in per centum of what the resistance would have been according to the law of its proportionality to the squares of the speeds. The prefixes of minus and plus indicate, respectively, whether the variation was less or more than the law :

Speeds of the vessel in geographical miles per hour.	Per centum of the resist- ance due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.	Speeds of the vessel in geographical miles per hour.	Per centum of the resist- ance due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.	Speeds of the vessel in geographical miles per hour.	Per centum of the resist- ance due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.	Speeds of the vessel in geographical miles per hour.	Per centum of the resist- ance due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.
5.0	.....	5.9	— 1.84	6.8	+ 9.51	7.7	+ 21.26
5.1	— 1.48	6.0	— 0.94	6.9	+ 11.19	7.8	+ 22.25
5.2	— 2.33	6.1	+ 0.27	7.0	+ 14.37	7.9	+ 22.21
5.3	— 2.90	6.2	+ 1.12	7.1	+ 16.29	8.0	+ 21.71
5.4	— 3.23	6.3	+ 2.49	7.2	+ 18.22	8.1	+ 21.96
5.5	— 3.36	6.4	+ 3.75	7.3	+ 19.86	8.2	+ 21.10
5.6	— 3.78	6.5	+ 5.17	7.4	+ 21.08	8.3	+ 20.03
5.7	— 3.02	6.6	+ 6.43	7.5	+ 22.19	8.4	+ 17.74
5.8	— 2.38	6.7	+ 8.07	7.6	+ 22.93	8.5	+ 12.75

From the above table it will be seen that the variation of the resistance of the hull from the law of its proportionality to the squares of the speeds was irregular in quantity, alternately increasing and decreasing. From the speed of 5.0 geographical miles per hour to that of between 6.0 and 6.1 geographical miles, the resistance varied in a lower ratio than that of the squares of the speeds, the ratio slowly decreasing until, at the speed of 5.6 geographical miles per hour, it was 3.78 per centum less than was due to the law. From the speed of 5.6 geographical miles per hour to that of between 6.0 and 6.1 geographical miles, the ratio slowly increased until, at the speed of between 6.0 and 6.1 geographical miles, the resistance was in exact accord with the law. From the latter speed, the resistance rapidly increased above that due to the law, up to the speed of 7.8 geographical miles per hour, where it was 23.29 per centum greater than was due to the law. From the speed of 7.8 geographical miles per hour, the variation from the law decreased until, at the speed of 8.5 geographical miles, the resistance was 18.75 per centum greater than was due to the law.

*Components of the resistance of the hull.*—The power applied to the propulsion of the hull is divided between effecting the displacement of the water, that is to say, scooping out the watery furrow or trench measured by the area of the vessel's greatest immersed transverse section and the distance run, and overcoming the friction of the immersed external surface of the vessel on the water. If we suppose that surface to have remained constant during the experiments, which was very nearly the case, its frictional resistance can be calculated for every variation of speed. It will be, in fact, in the ratio of the squares of the speeds; and, by deducting it from the experimental resistance of the vessel, the remainder will be the resistance of the immersed solid of the hull in function of form. The calculation of this frictional resistance with exactness is impossible, on account of the continuously varying curvature of the immersed surface of the hull. The speed of this surface relatively to the water in contact with it, is nowhere as great as the vessel's speed, except for the keel and other flat surfaces parallel thereto. An approximation, however, can be made by considering the speed of the surface relatively to the water in contact with it to be less than the speed of the vessel, in the ratio of the base to the hypotenuse of a right-angled triangle whose base is represented by the half length of the water-line, and whose height is represented by the half breadth of the water-line. The resistance of a square foot of the immersed surface, moving with the velocity of 10 feet per second, will be taken at 0.45 pound, and to vary as the squares of the speeds of the speeds. Applying this data, the speed of the surface is 8.26 feet per second when the speed of the vessel is 5.0 geographical miles per hour; hence the resistance of the 717 square feet of immersed surface of the hull, at that speed, is  $\left( \frac{717 \times 0.45 \times 8.26^2}{10^3} \right) = 220.14$  pounds.

In the columns of the following table, among others, will be found the frictional resistance of the immersed external surface of the hull ; its resistance in function of form, and the variations of the latter from the law of the proportionality of the resistance to the square of the speed from 5.0 to 8.5 geographical miles per hour, both inclusive :

Speeds of the vessel, in geographical miles per hour.	Squares of the speeds of the vessel, proportionally.	Resistances of the vessel at the different speeds.				
		Resistance of the vessel, in pounds.	Frictional resistance of the external immersed surface of the hull, in pounds.	Resistances of the vessel in function of form alone.		
				In pounds.	Proportionally.	Per centum of the resistance of the hull in function of form, due to the law of its proportionality to the square of the speed, which the experimental resistance varied from that law.
5.0	1.0000	315.4	220.1	95.3	1.0000	.....
5.1	1.0404	323.3	229.0	94.3	0.9895	- 4.89
5.2	1.0816	333.2	238.1	95.1	0.9979	- 7.74
5.3	1.1236	344.1	247.3	96.8	1.0158	- 9.59
5.4	1.1664	356.0	256.8	99.2	1.0409	- 10.76
5.5	1.2100	368.8	266.4	102.4	1.0745	- 11.20
5.6	1.2544	380.7	276.1	104.6	1.0976	- 12.50
5.7	1.2996	397.5	286.1	111.4	1.1689	- 10.05
5.8	1.3456	414.3	296.2	118.1	1.2392	- 7.91
5.9	1.3924	431.1	306.5	124.6	1.3074	- 6.10
6.0	1.4400	449.9	317.0	132.9	1.3945	- 2.16
6.1	1.4884	470.7	327.7	143.0	1.5005	+ 0.81
6.2	1.5376	490.4	338.5	151.9	1.5939	+ 3.66
6.3	1.5876	513.2	349.5	163.7	1.7177	+ 8.19
6.4	1.6384	536.9	360.7	176.2	1.8489	+ 12.25
6.5	1.6900	560.6	372.0	188.6	1.9790	+ 17.10
6.6	1.7424	587.3	383.6	203.7	2.1375	+ 22.68
6.7	1.7956	616.0	395.3	220.7	2.3158	+ 28.97
6.8	1.8496	644.7	407.2	237.5	2.4921	+ 34.74
6.9	1.9044	676.3	419.2	257.1	2.6978	+ 41.66
7.0	1.9600	707.0	431.5	275.5	2.8909	+ 47.50
7.1	2.0164	739.6	443.9	295.7	3.1028	+ 53.88
7.2	2.0736	773.2	456.5	316.7	3.3232	+ 60.26
7.3	2.1316	805.8	469.2	336.6	3.5320	+ 65.69
7.4	2.1904	836.5	482.2	354.3	3.7177	+ 69.73
7.5	2.2500	867.1	495.3	371.8	3.9014	+ 73.40
7.6	2.3104	895.8	508.6	387.2	4.0630	+ 75.86
7.7	2.3716	920.5	522.1	398.4	4.1805	+ 76.27
7.8	2.4336	946.3	535.7	410.6	4.3085	+ 77.04
7.9	2.4964	967.0	549.5	417.5	4.3809	+ 75.49
8.0	2.5600	990.8	563.5	427.3	4.4837	+ 75.14
8.1	2.6244	1009.5	577.7	431.8	4.5310	+ 72.65
8.2	2.6896	1027.3	592.1	435.2	4.5668	+ 66.07
8.3	2.7556	1043.2	606.6	436.6	4.5813	+ 66.26
8.4	2.8224	1057.0	621.3	435.7	4.5719	+ 61.99
8.5	2.8900	1082.4	636.2	446.2	4.6820	+ 62.01

From the above table, it will be seen that the variation of the resistance of the hull in function of form alone, is irregular, and very great from the law of its proportionality to the squares of the speeds, alternately decreasing and increasing. That variation is shown numerically in the last column of the table, in per centum of what the resistance would have been according to the above law ; the prefixes of minus and plus indicate that the variation is below or above the law.

From the speed of 5.0 geographical miles per hour, the resistance increased in a less ratio than the law of the squares, up to the speed of 5.6 geographical miles per hour where the difference was 12.50 per centum less than what the law of the squares required. From the speed of 5.6 geographical miles per hour, the variation from the law slowly decreased until, at the speed of nearly 6.1 geographical miles per hour, the resistance was in accord with the law. From the latter speed, the resistance rapidly increased above that due to the law up to the speed of 7.8 geographical miles per hour,

where it was 77.04 per centum greater than was due to the law. From the speed of 7.8 geographical miles per hour, the variation from the law decreased until, at the speed of 8.5 geographical miles per hour, the resistance was 62 per centum greater than was due to the law.

The resistance of the vessel at the different speeds was not only affected by the speed, but also, and greatly, by the action of the screw, the slip of which operated to excavate the water at the stern; and, as the slip of the screw in per centum of its axial velocity increased with the speed of the vessel, this cause was aggravated in producing at the higher speeds the great variation of the resistance of the hull above the law of its proportionality to the squares of the speeds.

*Of the influence of the number of blades into which the same area of the same kind of screw-surface is divided, and of their position.*—Screws A, E, and F have exactly the same diameter, pitch, and surface; their only variation being in the number of blades into which that surface is divided. Screw A has two blades, one directly opposite the other. Screw E has four blades, arranged in pairs; the blades of each pair are directly opposite each other, and each pair is at right angles to the other. Screw F is a Mangin screw, sometimes called a duplex screw. It is composed of the two pairs of blades of screw E, with one pair placed directly behind the other, so that when viewed in projection on a plane at right angles to the axis of the screw, they appear as only one pair. This was effected by revolving the after pair of blades upon the shaft, until it came in exact projection with the forward pair.

The propelling efficiency of these three screws is exactly the same. They all give an identical slip for the same speed of vessel; and, as their surface is the same in area and in kind, and as they make equal revolutions for equal speeds, the power absorbed by their surface in overcoming the cohesive resistance of the water must be equal.

From these results the inference is warranted that, *in the case of screws having the same kind and quantity of surface, their propelling efficiency, in smooth water, is not affected by either the number or the position of their blades.*

The above equality of effect is limited strictly to the case of *smooth water*, because, in rough water, the superiority in propelling efficiency of the four-bladed over the two-bladed screw, both having the same kind and quantity of surface, is well established. This superiority results wholly from the pitching of the vessel in rough water, whereby, during a given portion of the time, a greater portion of the two-bladed screw is raised out of the water than of the four-bladed screw. Were the entire pitch used, that is to say, did the screw-surface fill its entire disk when projected on a plane at right angles to its axis, the equality of effect of screws of different numbers of blades, but otherwise the same, would be equal both in smooth and in rough water; but when only a small fraction of the pitch (from  $\frac{1}{4}$  to  $\frac{1}{8}$  as is the case in practice) is used, this equality no longer obtains, and the fewer the number of blades into which the surface is distributed, the less becomes the propelling efficiency in rough water. For illustration, take the extreme case of a screw having only one blade, and using only, say, one-fourth of the pitch, a moderate degree of pitching by the vessel would keep the whole of this surface out of the water during one-half of the time; if, however, the same quantity and kind of surface were distributed in two blades placed opposite each other, only one-half of the surface could be kept out of the water one-half of the time, and with four equidistant blades, a still less portion of the surface would be thus inoperative.

In the following table will be found the slips of screws A, E, and F, for the speeds of vessel from 5.0 geographical miles per hour to 8.5, increasing by one-tenth of a geographical mile per hour. These slips are taken from the curve obtained in the manner hereinbefore described, and they are expressed in per centum of the axial speed of the screw :

Speed of the vessel in geographical miles per hour.	Slip of the screw in per centum of its speed.	Speed of the vessel in geographical miles per hour.	Slip of the screw in per centum of its speed.	Speed of the vessel in geographical miles per hour.	Slip of the screw in per centum of its speed.	Speed of the vessel in geographical miles per hour.	Slip of the screw in per centum of its speed.
5.0	7.82	5.9	8.79	6.8	9.76	7.7	12.28
5.1	7.92	6.0	8.87	6.9	9.93	7.8	12.63
5.2	8.03	6.1	8.96	7.0	10.10	7.9	12.95
5.3	8.15	6.2	9.08	7.1	10.33	8.0	13.33
5.4	8.26	6.3	9.19	7.2	10.60	8.1	13.65
5.5	8.37	6.4	9.30	7.3	10.88	8.2	13.91
5.6	8.49	6.5	9.40	7.4	11.20	8.3	14.16
5.7	8.59	6.6	9.50	7.5	11.56	8.4	14.38
5.8	8.69	6.7	9.62	7.6	11.92	8.5	14.57

Had the resistances of the vessel at different speeds been in the ratio of the squares of those speeds, and had the water acted on by the screw continued in the same condi-



tion at those different speeds, then the slip of the screw would have been constant, retaining the same per centum of its axial speed at all speeds of vessel. But, as the vessel's resistance at different speeds varied from the law of the square of the speed and as the water on which the screw acted did not continue in the same condition at different speeds of vessel, not filling the watery furrow made by the passage of the vessel, as rapidly at the higher speeds as at the lower, the screw's slip will vary according to the value of those two causes.

*Of the slips of screws of the same kind of surface, but of different quantities of surface.*—Screws B, C, and D have the same diameter, pitch, number and form of blades as screw A, differing from it only in quantity of surface. The helicoidal surface of screw A is 6.1321 square feet; of screw B, 4.8078 square feet; of screw C, 3.0661 square feet; and of screw D, 1.7417 square feet. An examination of their slips for equal speeds of vessel, relatively to their surfaces, will detect the law which determines their slips in function of their surfaces. This examination having been made for the experimental slips of each of the above screws, taken from its separate curve of slips, as hereinbefore described, for each speed of vessel from 5.0 geographical miles per hour to 8.5, increasing by one-tenth of a geographical mile per hour, there results the following law: *The absolute slips of screws having the same kind of surface and differing only in its quantity, are for the same speed of the same vessel in the ratio of the square roots of their surfaces.* By absolute slip is meant the speed of the water-current, in geographical miles per hour, (not in per centum,) caused by the screw in the exactly opposite direction to the vessel's course, and due to the mobility of the water in furnishing a fulcrum for the action of the screw.

The rationale of the above law is—

1st. That the resistance of water to motion is as the square of the impressed velocity.  
2d. That the resistance of the water to the advance of the vessel is equilibrated by the resistance of the water to the thrust of the screw.

3d. That, let the surface of the screw be what it may, the resistance of the water equilibrating its thrust is equal.

4th. That, the water, being a liquid, yields by virtue of its mobility to the thrust of the screw, and that the velocity or absolute slip, thus imparted to the water by the thrust of the screw, will be such that the product of the square of this velocity of the water and of the surface of the screw will be constant for a given speed of vessel.

Now, if  $S$  = the surface of the screw, and  $V$  = the velocity of the water, or absolute slip of the screw, for any given speed of vessel, then  $S \times V^2$  will be a constant for that speed of vessel; and if the value of  $S$  be changed, then, to maintain the constancy of the product  $S \times V^2$ , the value of  $V$  must be changed in the inverse ratio of the square roots of  $S$  in the two cases.

For example: Let  $S = 25$  square feet, and  $V = 2$  geographical miles per hour with any given speed of vessel; then,  $25 \times 2^2 = 100 =$  the constant. Now, if  $S$  be reduced to 9 square feet, then to find the value of  $V$  in the new case, the speed of the vessel remaining as before, we have  $\sqrt{9} : \sqrt{25} :: 2 : 3\frac{1}{3}$  geographical miles per hour, which is the velocity of the water pressed by the new screw surface 9 square feet, to give the vessel the same speed as before, because  $3\frac{1}{3}^2 \times 9 = 100 =$  the constant.

When the speed of the vessel and the absolute slip of the screw are known in geographical miles per hour, the relative slip of the screw, that is to say, its slip proportionally to its axial speed, is easily obtained and is usually expressed in per centum of the latter. For example, suppose in the first of the above cases that the speed of the vessel was 8 geographical miles per hour and the absolute slip of the screw 2 geographical miles per hour, then the axial speed of the screw would be  $(8 + 2 =) 10$  geographical miles per hour, of which 2 geographical miles per hour is 20 per centum, and this would be the slip of the screw. Now, in the second of the above cases, when the surface of the screw was reduced, but the speed of the vessel remained constant, the absolute slip of the screw being  $3\frac{1}{3}$  geographical miles per hour, and the vessel's speed being 8 geographical miles per hour as before, the axial speed of the screw becomes  $(8 + 3\frac{1}{3} =) 11\frac{1}{3}$  geographical miles per hour, and the slip of the screw becomes 29.41 per centum of its axial speed. By its axial speed is meant the product of its pitch and the number of revolutions made by it in a given time. This product is equal to the sum of the vessel's speed and that of the absolute slip of the screw.

When the speed of the vessel is given in geographical miles per hour, and the slip of the screw is given in per centum of the unknown axial speed of the screw, the slip of the screw in geographical miles per hour can be obtained from the following considerations:

Assuming the unknown axial speed of the screw to be represented by 100, its slip being known proportionally to this number, or in per centum of the screw's speed, the vessel's speed will be represented relatively to that of the slip by the difference between these two quantities, so that we thus have the speed of the slip and the speed of the vessel expressed proportionally; whence, as the absolute speed of the vessel per hour in geographical miles is given, the absolute speed of the slip of the screw in geographical miles per hour will be obtained by the simple proportion, as the vessel's speed in per centum of the screw's speed, is to the screw's slip in per centum of the



screw's speed, so is the vessel's absolute speed in geographical miles per hour, to the screw's absolute speed in geographical miles per hour.

For example, suppose the known slip of the screw to be 20 per centum of the screw's unknown axial speed, and the known speed of the vessel to be 8 geographical miles per hour, then the speed of the vessel relatively to the unknown speed of the screw will be  $(100 - 20 =) 80$ , and the proportion for obtaining the absolute slip of the screw in geographical miles per hour will be  $80 : 20 :: 8 : 2$ , the screw's slip in geographical miles per hour.

The surface of the screw may be the helicoidal surface, or its projection on a plane at right angles to or parallel with the axis, or it may be expressed by the fraction used of the pitch. Any of these quantities may be used, so long as the same ones are continued throughout, the screw-blade having, of course, the same form or outline in all cases. That is to say, if its front and back edges are parallel and at right angles in one case, they are to remain so for the other cases.

*Of the influence on the slip of the screw due to curving the front and back edges of its blades to the Griffith form, and to substituting a globe for the central portion of the screw-surface.*—Screw H was made from screw G by cutting the forward and after edges of the latter to the Griffith form, and by bolting upon the hub between the blades pieces of wood accurately fitted to those spaces, forming a globe around the screw's axis of 1.25 feet diameter, equal to 28.35 per centum of the screw's diameter. The diameter of the hub of screw H was 11.54 per centum of the screw's diameter. As screw G had a pitch continuously expanding from the forward edge of its blades to the after edge, the result of cutting off surface at those edges was to slightly increase the initial and lessen the final pitch for screw H, leaving the mean pitch unchanged, and, consequently, the same in both screws H and G. The change of pitch thus made was not material in its effect upon the slip. The reduction of surface, however, was considerable, both at the center and at the periphery of the screw, and its effect was to greatly increase the slip, raising it from 18.48 per centum, when the vessel's speed was 8.5 geographical miles an hour, to 21.99 per centum of the screw's axial speed.

*Of the relative economic propelling efficiency of the screws.*—The function of a screw being to apply to the propulsion of a vessel the power received by its shaft from the engine, and the power thus received being the net power developed by the engine, that is, the power which remains after deducting what is necessary to work the engine *per se*, it is evident that the economic propelling efficiency of a screw will be represented by the per centum of the net power developed by the engine, which is expended in the propulsion of the vessel. This per centum will be found on the last line (23) of the preceding tables, numbered from 1 to 6, both inclusive, containing the data and results of the experiments.

In the following table, No. 7, this per centum will be found expressed, relatively for the different screws at the different speeds of vessel from 5.0 to 8.5 geographical miles per hour.

Table No. 7, containing the relative economic propelling efficiency of screws A, B, C, D, E, F, G, and H.

Relative economic propelling efficiency of screws.	Speed of the vessel per hour in geographical miles of 6,086 feet.							
	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
<i>In per centum of the net power applied to the screw-shaft.</i>								
A, E, and F.....	79.81	79.09	78.73	78.47	78.23	77.12	75.41	74.05
B.....	80.71	79.99	79.55	79.20	78.74	77.43	75.55	74.05
C.....	79.96	79.14	78.59	78.08	77.41	75.72	73.52	71.82
D.....	78.74	77.82	77.07	76.36	75.39	73.19	70.42	68.43
G.....	76.78	75.89	75.67	75.36	74.95	73.47	71.97	69.53
H.....	77.24	76.23	75.65	75.11	74.42	72.51	69.87	68.00
<i>Relatively.</i>								
A, E, and F.....	0.9888	0.9887	0.9897	0.9908	0.9935	0.9960	0.9981	1.0000
B.....	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
C.....	0.9907	0.9894	0.9879	0.9859	0.9831	0.9779	0.9731	0.9699
D.....	0.9756	0.9729	0.9688	0.9651	0.9574	0.9452	0.9321	0.9241
G.....	0.9513	0.9487	0.9512	0.9515	0.9519	0.9489	0.9433	0.9390
H.....	0.9570	0.9536	0.9510	0.9484	0.9451	0.9365	0.9248	0.9183

An examination of the immediately preceding table shows that, at all the experimental speeds, the propelling efficiency of screw B was the most economical, except in the single instance of screws A, E, and F, at the vessel's maximum speed of 8.5 geographical miles per hour, which gave an equal result.

The propelling efficiency of screws A, E, and F ranged from equality with that of

screw B at the maximum speed of vessel to one per centum less economical at the minimum speed.

The screw C was less economically efficient than screw B by quantities ranging from one per centum at the minimum speed of vessel to three per centum at the maximum speed.

The screw D was less economically efficient than screw B by quantities ranging from 2½ per centum at the minimum speed of vessel to 7½ per centum at the maximum speed.

These results from screws A, E, and F, and screws B, C, and D, which only differed in that the three latter were composed of less fractions of the pitch than the three former, show that each diminution of this fraction below that of screws A, E, and F, namely, 0.3570, was economically injurious, the loss of useful effect by the increase of slip consequent on this diminution being greater than the gain of useful effect by the friction of the screw's surface on the water, due to the same cause.

Screw G, composed of nearly the same fraction of pitch as screw B, namely, 0.3446, and having the same diameter, had a pitch which differed in kind from that of screw B, and in quantity. It was both greater and, instead of being uniform, expanded continuously from the forward to the after edge of the blades. Screw G was less economically efficient than screw B by quantities ranging from 5 per centum at the minimum speed of vessel to 6 per centum at the maximum speed.

Screw H was the Griffith screw, formed from screw G by decreasing its surface at the center and at the periphery. It was less economically efficient than screw B by quantities ranging from 4½ per centum at the minimum speed of vessel to 8 per centum at the maximum speed.

The foregoing relative economic propelling efficiencies of the different screws are for *smooth water with the vessel unaffected by wind*. The effect of a head wind being to increase the resistance of a vessel, increases correspondingly the slips of the screws, and consequently changes their relative propelling efficiencies, thereby making those which gave the less propelling efficiency when unaffected by a head wind give a still less propelling efficiency when affected by it. In the case of an aft wind this result would be reversed. The trials of different screws in smooth water, with the vessel unaffected by wind, give their relative propelling efficiencies for those conditions only; but if those conditions be changed, these relative propelling efficiencies will change also. A really exhaustive series of experiments on screws would embrace the determination of their relative economic propelling efficiencies in smooth water with the vessel unaffected by wind, in smooth water with head wind and also with aft wind, in rough water with the vessel unaffected by wind, and in rough water with head wind and also with aft wind. Such a trial would show that the relative economic propelling efficiencies of screws of different types, dimensions, and proportions, applied to the same vessel, varied greatly with the varying conditions of wind and water, even to reversal in many cases, so that the screw which gave the highest result under one set of conditions might give the lowest under another.

*Of the influence of different surfaces of screws otherwise the same, on the piston-pressure.*—It is evident that, with the same engine and the same pitch of screw, abstraction being made of the friction of the screw-surface on the water, the net pressure on the piston of the engine must be the same at the same speed of vessel, let the surface of the screw and its slip be what it may. Accordingly, if we examine the remainder of the quantities on line 8, after deducting those on line 10, and for corresponding columns, in tables No. 1 to No. 4, both inclusive, containing the data and results of the experiments with screws A, E, and F, and B, C, and D, we shall find such to be the fact. The quantities on line 8 are the net pressures on the piston; that is to say, they are the pressures which remain after deducting from the mean gross-effective indicated pressure, (line 6,) the pressure (line 7) required to work the engine *per se*. The quantities on line 10 are the piston-pressures required for overcoming the cohesive resistance of the water by the screw-blades; or, as it is often termed for brevity, though incorrectly, for overcoming the friction of the screw-surface on the water. Making the comparison for the speed of vessel 8.5 geographical miles per hour, column h of the tables, we have the following results:

Screw.	Net pressure on the piston, (line 8,) in pounds, per square inch.	Piston-pressure to overcome the friction of the screw surface on the water, (line 10,) in pounds, per sq. inch.	Difference of the two preceding columns.	Slip of the screw in per centum of its speed.	Fraction used of the pitch of the screw.
A, E, and F .....	68. 1537	3. 9665	64. 1872	14. 57	0. 357
B .....	66. 8945	2. 8029	64. 0916	16. 15	0. 349
C .....	66. 2274	2. 2252	64. 0022	19. 43	0. 358
D .....	65. 5689	1. 3901	64. 1788	24. 24	0. 404

*Of the influence of different pitches of screws, be their other dimensions what they may, on the piston-pressure.*—With the same engine, it is also evident that, in the case of screws of different pitches, abstraction being made of the friction of the screw-surface on the water, the net pressure on the piston of the engine must, at the same speed of vessel, be in the direct ratio of the pitches, let the other dimensions of the screws, and their slips, be what they may; for the pitch measures the leverage at which the piston-pressure acts, and, when the speed of the vessel is the same, the slip cannot affect the problem, nor, consequently, can the dimensions of the screw other than the pitch, because their only function is to obtain a fulcrum from the water by embracing a sufficient quantity of that mobile substance.

This assumption can be tested by comparing the results from screws A to D, both inclusive, whose pitch is 5.136 feet, with those from screws G and H, whose pitches are 7 feet.

The net piston-pressure, less the pressure required to overcome the friction of the screw-surface on the water, is, for screws A to D, as above determined, 64.11495 pounds per square inch, which, increased in the ratio of 5.136 to 7.000, gives 87.3842 pounds per square inch of piston for the pressure with screw G. On referring to table No. 5, line 8, column h, we find the quantity 94.4132; and, on line 10, same table and column, the quantity 6.8088; deducting the latter from the former, we have 87.6044 pounds per square inch of piston, or almost exactly the same as obtained by the calculation from screws A to D, both inclusive.

Making the comparison for screw H in the same manner, we have the 64.11495 pounds per square inch of piston with screws A to D, increased to  $(5.136 : 7 :: 64.1145 : )$  87.3842 pounds with screw H. On referring to table No. 6, line 8, column h, we find the quantity 92.5013; and, on line 10, same table and column, the quantity 5.0530; deducting the latter from the former, we have 87.4483 pounds, which is almost exactly the same as the 87.3842 pounds.

*Trials of the machinery of the United States steam-launch No. 4, with screw G, made on the 17th of February, 1870, with the vessel secured to the wharf of the Mare Island navy-yard, Cal.*

During the experiments with screws A to H, made with the steam-launch No. 4, in the bay in front of Mare Island, two trials of screw G were made with the vessel secured to the wharf of the navy-yard, at right angles to the current, from the effect of which it was also shielded by the projecting wharf, so that the resistance of the screw was no more affected by the current than if the trials had been in still water. The vessel's draught of water was the same as during the experiments in the bay, and the same indicators and dynamometer were employed.

The trials were made on the 17th of February, 1870, and each lasted thirty minutes, during which a continuous dynamometer-diagram; and indicator-diagrams were taken from each end of each cylinder as rapidly as possible; all preparations facilitating dispatch having previously been made.

The machinery was operated for an hour before commencing the trials, to bring it into normal working condition; and during the trials, the steam-pressure in the boiler, the height of the barometer, and the temperatures of the external atmosphere in the shade, of the engine-room, and of the water in the bay, were taken at the end of every three minutes. The number of double-strokes made by the engines' pistons was shown by the register.

The objects of the experiments were to ascertain: 1st. How nearly the thrust of the screw followed the proportion of the square of the number of revolutions made by it in equal time, under the extreme conditions of widely varying power and with the screw acting always at the same place, the water flowing to the screw without the screw advancing through the water. 2d. To what extent the proportion of dynamometer-power varied from the indicated power under these extreme conditions, and with the greatly varying speeds of pistons and pressures upon them. 3d. The pressure upon the pistons required to work the engines *per se*. To determine the 3d the engines, after the completion of the trials, were uncoupled from the line-shafting, and worked at various speeds of piston with the feed-pump pumping at its proper rate to supply the boiler, a considerable number of indicator-diagrams being taken at each speed from each end of each cylinder. The results varied but very slightly, and with the addition of a trifle for the friction of the line-shafting, gave two pounds per square inch of pistons for the pressure required at all speeds of piston to work the unloaded engines.

The data and results of these wharf-trials will be found in the following table No. 8, arranged in two columns, headed respectively "1st trial" and "2d trial." In the "1st trial" the number of revolutions made by the screw in equal times was  $(\frac{22.799}{11.711} = )$  2.796 times more than in the "2d trial," a sufficiently great difference to strongly mark the consequences. The squares of the number of revolutions made by the screw in equal time during each trial, compare as 7.8176 and 1.0000 respectively.

The pressure (2 pounds per square inch of pistons) required to work the engines, *per*

se, being deducted from the gross effective indicated pressure per square inch of pistons, leaves a quantity called the "net pressure," which, in the two trials, should have the same ratio as the squares of the number of revolutions made by the screw in equal time. The net pressures compare as  $(\frac{98}{154.5})^2 = 7.1533$  to 1.0000. We have seen that the squares of the number of revolutions made by the screw in equal time compared as 7.8176 to 1.0000, which was doubtless caused by the water not flowing in with sufficient rapidity to solidly fill the displacement by the screw as fast as formed. The discrepancy is considerable; the pressure at the high speed of screw being 84 per centum less than it should have been, had the water on which it acted been as solid as at the low speed. It was observed constantly, during the trials, that there was no surface-current of water flowing from the bow towards the stern to replace the water displaced by the screw. On the contrary, the surface-water was absolutely quiescent; it had no movement in any direction. The water supplying the screw came up from beneath in nearly a vertical column. The depth of water at the wharf was very considerable, and it had a free movement between the bottom and the vessel's keel. An unbroken wave or elevation of water covered the screw during its action; the height of this wave varying, of course, with the rapidity of the rotation of the screw.

In the "1st trial," the dynamometrical horses-power is  $(\frac{24.827}{27.916}) = 0.8894$  of the net indicated horses-power developed by the engines. In the "2d trial" the dynamometrical horses-power is  $(\frac{1.255}{1.396}) = 0.8990$ .

The thrusts of the screw, per dynamometer, in the two trials, compare respectively as  $(\frac{1093.5}{154.5}) = 7.0777$  and 1.0000; while the corresponding net pressures on the pistons compare as 7.1533 and 1.0000.

The distribution of the power, calculated as hereinbefore described, will be as follows for the two wharf trials, namely:

*Distribution of the power during the 1st trial at the wharf.*

	Horses-power.	Per centum.
Gross effective indicated horses-power developed by the engines....	28.486	
Power required to work the engines and shafting, <i>per se</i> .....	0.570	
Net power applied to the shaft.....	27.916	or 100.00
Power absorbed by the friction of the load.....	2.094	or 7.50
Power expended in overcoming the cohesive resistance of the water by the screw-blades.....	0.878	or 3.14
Power expended in the displacement of the water by the screw....	24.944	or 89.36
Totals.....	27.916	or 100.00

The power expended in the displacement of the water by the screw, as directly measured by the dynamometer, was 24.827 horses.

*Distribution of power during the 2d trial at the wharf.*

	Horses-power.	Per centum.
Gross effective indicated horses-power developed by the engines...	1.600	
Power required to work the engines and shafting, <i>per se</i> .....	0.204	
Net power applied to the shaft.....	1.396	or 100.00
Power absorbed by the friction of the load.....	0.105	or 7.50
Power expended in overcoming the cohesive resistance of the water by the screw-blades.....	0.040	or 2.87
Power expended in the displacement of the water by the screw....	1.251	or 89.62
Totals.....	1.396	or 100.00

The power expended in the displacement of the water by the screw, as directly measured by the dynamometer, was 1.255 horses.

During the "1st trial" with the vessel stationary at the wharf, the screw made 99.9 revolutions per minute, with a net pressure of 98 pounds per square inch of pistons: and when steaming freely at full power, with the same immersion of the screw, and a net pressure of 94.4132 pounds per square inch of pistons, (Table No. 5, line 8, column h,) the screw made 151.0832 revolutions per minute. Increasing the latter number in the ratio of the square roots of the net pressures, we have  $(\sqrt{94.4132} : \sqrt{98} :: 151.0832 : 153.9236)$ , the number of revolutions that would have been made with the vessel steam-



ing freely. had the net pressure on the pistons been 98 pounds per square inch. Hence it follows that, with equal net pressure upon the pistons, the screw will make  $\left(\frac{153.9236}{99.9}\right)$  54.08 per centum more revolutions in equal time when the vessel is steaming freely than when it is held stationary at the wharf.

Again, it will be seen by examining lines 5 and 8, column c, Table No. 5, that when the vessel is steaming freely with a net pressure upon the pistons of 39.2660 pounds per square inch, the screw makes 97.9321 revolutions per minute. Increasing this net pressure in the ratio of 97.9321<sup>2</sup> to 99.9<sup>2</sup>, we have, for 99.9 revolutions of the screw per minute when the vessel is steaming freely, the net pressure of 40.8602 pounds per square inch. Hence it appears that, revolution for revolution, there was required when the vessel was stationary at the wharf  $\left(\frac{98.0000-40.8602 \times 100}{40.8602}\right)$  139.84 per centum

more pressure to turn the screw than when the vessel was freely under way.

Of course the above two determinations only apply rigorously for the speeds of vessel at which they are made. The results show an enormously greater proportional resistance of the screw when the vessel is stationary at the wharf than when steaming freely under way than is found in the case of large screw-steamers having considerable length, and doubtless arises from the fact that when the launch—a small and very short vessel—was steaming freely under way, the water did not reach the screw as solidly as it does in the case of long screw-steamers, while, when steaming at the wharf, the difference in this particular was very greatly less.

Table No. 8, containing the data and results of the trials made on the 17th of February, 1870, of the machinery of steam-launch No. 4, with screw G, the vessel being secured to the wharf of the Mare Island navy-yard, California.

	First trial.	Second trial.
TOTALS.		
Duration of the trial in minutes .....	30.	30.
Number of double strokes of engines' pistons and of revolutions of the screw.	2, 997.	1, 072.
TEMPERATURES.		
Temperature, in degrees Fahrenheit, of the external atmosphere.....	54.	59.
Temperature, in degrees Fahrenheit, of the water in the bay.....	52.	53.
Temperature, in degrees Fahrenheit, of the engine-room .....	80.	83.
ENGINES.		
Number of double strokes made per minute by the engines' pistons.....	99. 900	35. 733
Steam-pressure in the boiler, in pounds per square inch above the atmosphere.	107.	19.
Position of the throttle-valve .....	Wide open.	Wide open.
Fraction of the stroke of the pistons completed when the steam was cut off ..	0. 858	0. 858
Thrust of the screw, in pounds, per dynamometer.....	1, 093. 5	154. 5
Height of the barometer, in inches of mercury .....	29. 85	29. 84
STEAM-PRESSURES IN CYLINDERS PER INDICATOR.		
In pounds per square inch above zero at commencement of stroke of pistons.	119. 0	32. 1
In pounds per square inch above zero at point of cutting off the steam .....	112. 3	30. 1
In pounds per square inch above zero at end of stroke of pistons .....	93. 7	26. 5
In pounds per square inch above zero against the pistons during their stroke.	18. 4	16. 1
Mean gross effective pressure on pistons, in pounds per square inch .....	100. 0	15. 7
Mean total pressure on pistons, in pounds per square inch.....	118. 4	31. 8
Mean net pressure on pistons, in pounds per square inch .....	98. 0	13. 7
POWER.		
Gross effective indicated horses-power developed by the engines .....	28. 486	1. 600
Total horses-power developed by the engines .....	33. 728	3. 240
Net horses-power developed by the engines.....	27. 916	1. 396
Dynamometrical horses-power developed by the engines .....	24. 827	1. 255

Trial of the machinery of the United States steam-launch No. 4, made on the 30th of March, 1870, with screw G, the vessel being secured to the wharf of the Mare Island navy-yard, California, and having its stern raised six inches and held suspended by a floating crane.

This experiment, the data and results of which will be found in the following table, No. 9, was made with the vessel secured to the wharf of the Mare Island navy-yard in such a way that the keel was at right angles to the current. The stern of the vessel was raised six inches and held suspended by a floating crane, which, in common with

the vessel, rose and fell with the tide. The object of thus suspending the stern of the vessel above the level at which it floated when resting in the water with its screw not in action, was to enable the engines to make a greater number of double strokes of pistons with the same piston-pressure, in a given time, than they would have done without such suspension; in fact, to make nearly the same number per minute they would have done with the vessel in free motion and the same piston-pressure.

The principal objects of the experiments were :

1. To ascertain the rate of combustion of anthracite in the furnace under the experimental conditions.
2. To ascertain the economic vaporization by the boiler with anthracite at this rate of combustion.
3. To ascertain the indicated and dynamometrical horses-power developed by the engines.
4. To ascertain the cost of the indicated and of the dynamometrical horses-power, in pounds of anthracite, in pounds of the combustible portion of the anthracite—that is, of the portion which remains after deducting the refuse in ash, clinker, &c.—and in pounds of feed-water consumed per hour.
5. To ascertain the condensation of steam in the cylinders.

In making the experiment, the same indicators and dynamometer were used as were employed throughout all these experiments. The anthracite was carefully weighed on the wharf and delivered into the fire-room as fast as consumed. The refuse from it in ash, clinker, &c., was collected and weighed in the dry state at the end of the trial, and on the same scales as the anthracite. The feed-water was accurately measured in an iron tank placed on the wharf. From this tank the water was delivered through a hose into a smaller tank on board the vessel, from which it was pumped into the boiler by the feed-pump of the engines. In passing from the last tank to the boiler the feed-water traversed the "heater" and had its temperature raised by the exhaust steam of the engines. The feed-water was rain-water.

The temperatures of the external atmosphere, of the engine and boiler room, of the water in the bay, of the feed-water in the tank and when it entered the boiler, were taken every fifteen minutes, by the usual mercurial thermometers. At the same intervals there were noted the steam-pressure in the boiler and the height of the barometer. The throttle-valve was kept wide open, and the point of cutting off the steam remained constant during the trial. The number of double strokes made by the engines' pistons was taken by a counter.

An indicator-diagram was taken every fifteen minutes from each end of each cylinder. The diagrams from the dynamometer were practically continuous.

All the observations were recorded, at fifteen minutes intervals, in a tabular record.

In commencing the experiment, the engines were operated several hours to bring them into proper adjustment, and the fires to steady action. The latter were then thoroughly cleaned and made about six inches thick, the height of the water in the boiler glass gauge marked, the steam-pressure in the boiler, and the time noted, and the experiment held to commence. At its end, the fires were again thoroughly cleaned, and left of the same thickness as at the commencement, with the water at the same level in the boiler, and having the same steam-pressure upon it.

#### RESULTS.

The maximum rate of combustion that could be sustained was 24.655 pounds of anthracite per hour per square foot of grate-surface, with a blast up the chimney given by the exhaust of the two cylinders working at right angles to each other, and having a steam-pressure at the end of the stroke of the pistons of 66.8 pounds per square inch above the atmosphere. The number of exhaustions made per minute was 472. The per centum of this anthracite in refuse being 16.23, there were consumed of its remaining or combustible portion, 20.653 pounds per hour per square foot of grate-surface. To have sustained this rate of combustion with natural draught would have required a chimney 60 feet high above the level of the grate.

The economic vaporization for this fuel and rate of combustion, and for the type and proportion of boiler, was very high, being 9.687 pounds of water vaporized by one pound of the combustible portion of the anthracite from the temperature of 212 degrees Fahrenheit, and under the standard atmospheric pressure of 29.92 inches of mercury.

The condensation of steam in the cylinders, other than that due to the development of the power, was 31.76 per centum of the weight of steam generated in the boiler. This large per centum is due to the small size of the cylinders. With large cylinders, working without a condenser, and with the same low measure of expansion—the steam not being cut off until 0.858 of the stroke of the pistons was completed—the condensation, other than that due to the development of the power, would not have exceeded one-tenth what it proved to be with these small cylinders. Nothing could more strikingly show the necessity for using highly superheated steam with small cylinders. The pistons and valves of these were perfectly tight, and the cylinders and steam-pipes were well protected from radiation.



The distribution of the gross effective indicated power developed by the engines, calculated in the manner hereinbefore explained, is as follows, namely :

	Horses- power.	Per centum.
Gross effective indicated horses-power developed by the engine....	27.221	
Power required to work the engines and shafting <i>per se</i> .....	0.673	
Net power applied to the shaft.....	26.548	or 100.00
Power absorbed by the friction of the load.....	1.991	or 7.50
Power expended in overcoming the cohesive resistance of the water by the screw-blades.....	1.455	or 5.48
Power expended in the displacement of the water by the screw....	23.102	or 87.02
Totals .....	26.548	or 100.00

From the above calculation, it appears that the power expended in the displacement of the water by the screw working with the vessel secured to the wharf, or, what is the same thing, the dynamometrical power by calculation, was 23.102 horses. This power, as directly measured by the dynamometer, was 23.025 horses, or sensibly the same.

During the trial, the force of the blast in the chimney was ascertained by direct measurement. An iron pipe of small diameter was placed immediately over the blast-nozzle, and half an inch above it. This pipe extended vertically to the top of the chimney, over the edge of which it was bent and brought down to a convenient distance, where it was joined to an inverted glass siphon containing mercury. The pressure of the blast in one leg of the siphon forced the mercury up the other leg, and the height of the mercurial column from the mercury-level in one leg to that in the other leg measured it. The mean of a great many observations showed that when the steam-pressure in the boiler was 102 pounds per square inch above the atmosphere, the height of the column was 6.6 inches, equivalent to a pressure of 3.24 pounds per square inch.

Table No. 9, containing the data and results of an experiment made with the machinery of the United States steam-launch No. 4, with screw G, to ascertain the evaporative efficiency of the boiler with anthracite, and the cost of the indicated and dynamometrical horse-power in pounds' weight of steam and of fuel consumed per hour. (During this experiment the vessel was secured to the wharf of the Mare Island navy-yard, California, with the stern raised six inches and held suspended by a floating crane.)

Date of commencing the experiment.....	9.23 a. m., March 30, 1870.
VESSEL.	
Vessel's draught of water, in feet and inches.....	{ forward.. 3 7 mean .... 3 11½ aft..... 4 4
TOTAL QUANTITIES.	
Duration of the experiment, in consecutive hours and minutes.....	9.18
Number of double strokes of engines' pistons, and of revolutions of the screw .....	65,844.
Number of pounds of anthracite consumed.....	1,910.
Number of pounds of refuse from the anthracite in ash, clinker, &c .....	310.
Number of pounds of combustible consumed.....	1,600.
Per centum of the anthracite in refuse of ash, clinker, &c.....	16.23
Cubic feet of feed-water pumped into the boiler from the tank .....	220.212
Pounds of feed-water pumped into the boiler from the tank.....	13,728.439
RATE OF COMBUSTION.	
Pounds of anthracite consumed per hour....	205.376
Pounds of combustible consumed per hour .....	172.043
Pounds of anthracite consumed per hour per square foot of grate-surface.....	24.655
Pounds of combustible consumed per hour per square foot of grate-surface .....	20.653
Pounds of combustible consumed per hour per square foot of heating-surface.....	0.927
TEMPERATURES.	
Temperature, in degrees Fahrenheit, of the external atmosphere.....	61
Temperature, in degrees Fahrenheit, of the engine and boiler-room.....	88.
Temperature, in degrees Fahrenheit, of the bay water..	60.
Temperature, in degrees Fahrenheit, of the feed-water in the tank.....	58.
Temperature, in degrees Fahrenheit, of the feed-water entering the boiler.....	125.

ENGINES.	
Number of double strokes made per minute by the engines' pistons.....	118
Steam-pressure in boilers in pounds per square inch above the atmosphere.....	92
Position of the throttle-valve.....	Wide open.
Fraction of the stroke of the piston completed when the steam was cut off.....	0.834
Thrust of the screw in pounds, per dynamometer.....	858.55
Height of the barometer in inches of mercury.....	29.38
STEAM-PRESSURES IN CYLINDERS, PER INDICATOR.	
In pounds per square inch above zero at commencement of stroke of pistons.....	104.2
In pounds per square inch above zero at point of cutting off the steam.....	98.7
In pounds per square inch above zero at end of stroke of pistons.....	81.2
In pounds per square inch above zero against the pistons during their stroke.....	21.1
Mean gross effective pressure on pistons, in pounds per square inch.....	80.9
Mean total pressure on pistons, in pounds per square inch.....	102.0
Mean net pressure on pistons, in pounds per square inch.....	78.9
POWER.	
Absolute:	
Gross effective indicated horses-power developed by the engines.....	27.221
Total horses-power developed by the engines.....	34.320
Net horses-power developed by the engines.....	26.548
Dynamometrical horses-power developed by the engines.....	23.025
Economic:	
Pounds of anthracite consumed per hour per gross effective indicated horse-power..	7.545
Pounds of anthracite consumed per hour per total horse-power.....	5.964
Pounds of anthracite consumed per hour per net horse-power.....	7.736
Pounds of anthracite consumed per hour per dynamometrical horse-power.....	8.920
Pounds of combustible consumed per hour per gross effective indicated horse-power..	6.320
Pounds of combustible consumed per hour per total horse-power.....	5.014
Pounds of combustible consumed per hour per net horse-power.....	6.420
Pounds of combustible consumed per hour per dynamometrical horse-power.....	7.473
Pounds of feed-water consumed per hour per gross-effective horse-power.....	54.229
Pounds of feed-water consumed per hour per total horse-power.....	43.012
Pounds of feed-water consumed per hour per net horse-power.....	55.604
Pounds of feed-water consumed per hour per dynamometrical horse-power.....	64.112
VAPORIZATION.	
Total:	
Total number of pounds of water that would have been vaporized in the boiler, had it been supplied at the temperature of 100 degrees Fahrenheit and vaporized under the atmospheric pressure of 29.92 inches of mercury.....	13,876.906
Total number of pounds of water that would have been vaporized in the boiler, had it been supplied at the temperature of 212 degrees Fahrenheit and vaporized under the atmospheric pressure of 29.92 inches of mercury.....	15,499.255
Economic:	
Pounds of water vaporized from 100° Fahrenheit by one pound of anthracite.....	7.365
Pounds of water vaporized from 100° Fahrenheit by one pound of combustible.....	8.673
Pounds of water vaporized from 212° Fahrenheit by one pound of anthracite.....	8.115
Pounds of water vaporized from 212° Fahrenheit by one pound of combustible.....	9.627
CONDENSATION.	
Pounds of steam discharged from the cylinders into the atmosphere, calculated from the pressure of the steam at the end of the stroke of the pistons.....	8,452.040
Pounds of steam condensed in the boiler and cylinders to furnish the heat transmuted into the total power developed by the engines, according to Joule's equivalent.....	930.696
Sum of the above two quantities.....	9,382.736
Per centum of the steam evaporated in the boiler, condensed in the boiler and cylinders to furnish the heat transmuted into the total power developed by the engines.....	6.78
Per centum of the steam evaporated in the boiler not accounted for by the indicator....	31.65
Difference, due to all causes, between the weight of feed-water pumped into the boiler, according to the tank, and the weight of steam discharged from the cylinders into the atmosphere at the end of the stroke of the pistons, per indicator, expressed in per centum of the feed-water.....	38.43

Very respectfully, your obedient servant,  
**B. F. ISHERWOOD.**  
*Chief Engineer.*

To Engineer-in-Chief Wm. W. Wood, U. S. N.,  
*Chief of the Bureau of Steam Engineering, Navy Department.*

NOVEMBER 16, 1874.

*Experiments made to ascertain the dynamometrical resistances to dragging of the experimental screws A, B, C, D, E, F, and H, of the United States steam-launch No. 4, when it was towed by the United States screw-steamer Monterey, with its screws disconnected from its engines, and revolving freely by the pressure of the water on the forward side of their blades, and held stationary in different positions.*

The following experiments are the only ones of their kind of which the writer has knowledge. They supply, in part, a great desideratum in marine steam-engineering, and show the loss of speed sustained by a steamship when under sail alone, consequent on the dragging of its screw through the water in different stationary positions, and when revolving freely by the pressure of the water on the forward surface of their blades. They also show the comparative resistances of screws of different kinds, with different proportions and number of blades, under the above conditions.

The screws employed in these experiments were screws A, B, C, D, E, F, and H, of the United States steam-launch No. 4, embracing all, with the exception of screw G, that were used in the experiments made with that launch and detailed in the immediately preceding report.

During the experiments about to be described, the launch was at a less draught of water than during those referred to, and had the following dimensions and proportions in the water :

Length, in feet, on load water-line, from forward edge of rabbet of stem to after side of stern-post.....	54.40
Extreme breadth, in feet, on load water-line.....	11.88
Depth, in feet, of hull from load water-line to lower edge of rabbet of keel .....	<div> <div>forward. 2.160</div> <div>mean ... 2.891</div> <div>aft..... 3.622</div> </div>
Load-draught, in feet, of water from the bottom of the keel.....	<div> <div>forward. 2.66</div> <div>mean ... 3.62</div> <div>aft..... 4.58</div> </div>
Area, in square feet, of the greatest immersed transverse section.....	21.83
Area, in square feet, of the immersed external surface of the hull proper, exclusive of keel and rudder .....	571.
Area, in square feet, of the immersed external surface of the hull, inclusive of keel (100.8 square feet) and rudder, (13.2 square feet).....	685.
Displacement, (cubic feet).....	693.117
Displacement, (tons).....	19.842
Ratio of the area of the greatest immersed transverse section to the area of its circumscribing parallelogram.....	0.6356
Ratio of the displacement to its circumscribing parallelopipedon.....	0.3710

The remaining dimensions of the launch can be obtained from the immediately preceding report. Its hull, during the experiments about to be described, had 0.265 foot draught of water less than during the experiments on the propelling efficiency of the screws, with, of course, a corresponding decrease in the area of the greatest immersed transverse section, in the area of the immersed external surface, and in the displacement. The greatest immersed transverse section and the immersed solid of the hull were also sharper than with the greater draught of water. The resistance of the hull

must, therefore, have been less. It was in fact  $\left(\frac{707-631 \times 100}{707} =\right)$  10½ per centum less at the speed of seven geographical miles per hour, as measured by the dynamometer.

#### MANNER OF MAKING THE EXPERIMENTS.

The screw-steamer Monterey, by which the steam-launch No. 4 was towed, is a small tug attached to the Mare Island navy-yard. On the deck of this vessel, at the stern, the bed-plate of a very sensitive dynamometer was bolted, consisting of a single horizontal lever, one end of which bore against a vertical steel knife-edge, by means of a steel bush, the knife-edge being firmly secured to the bed-plate. The other end was articulated to a spiral spring, the opposite extremity of which, in its turn, was also articulated to the bed-plate. At one-tenth of the distance between the points at which the lever was secured to the bed-plate, measured from the end opposite that to which the spring was attached, was a vertical steel knife-edge bearing against a steel bush. To the extremities of this knife-edge a small steel loop, U-shaped, was articulated, and to this loop the tow-line from the steam-launch was fastened. The leverage of the spring against the tow-line was exactly ten to one. The weight of the lever was supported on delicate brass friction-rollers, polished, and moving on polished brass ways. Great precaution was thus used to make the friction of the dynamometer as little as possible, and it was reduced to the extent that one-fourth of a pound tension on the spring was sufficient to give movement to the unloaded instrument.

A scale, graduated to pounds by careful trial for its whole length, was attached to the base-plate of the spring, and the opposite end of the spring carried a pencil, which traced on a moving sheet of paper the curve of tensions described by the combined movement of the pencil and paper, and measured by the scale. The paper was wound around a light polished brass cylinder of eight inches diameter, the steel axle of which, at each end, was supported in brass bearings secured to the bed-plate of the dynamometer. This cylinder received a rotary movement from the screw-shaft of the vessel by means of two shafts at right angles to each other, the first being horizontal and lying just above the deck, the second being vertical and connecting the first, by my means of miter-gearing, with the screw-shaft. The vertical shaft received its movement from the screw-shaft by means of an endless worm and wheel, and the cylinder received its movement from the horizontal shaft by similar mechanism. The dynamometer-diagram, thus traced, was sufficiently long for a single run of the vessel, so that it was continuous from one end of the base to the other.

The base used was the one employed in the previous experiments on the propelling efficiencies of the screws of steam-launch No. 4, already referred to. It was a straight line 8,950 feet long, in smooth water, and under the lee of the high ground of Mare Island.

The tow-line was a small cord, just strong enough to sustain the maximum tension without breaking, and 170 feet in length between the vessels. It was attached, by means of a bridle, to the bows of the launch about 18 inches above the deck, so that the towing strain was exactly in the vertical plane of the keel. The screw of the Monterey had but a very small slip when towing the launch, so that any water thus thrown backward lost its movement within a very short distance and exercised no effect upon the following launch. The strain on the dynamometer exerted by the tow-line alone, at different angles of inclination from the vertical, was experimentally ascertained and deducted from the strain on the dynamometer when towing the launch with the same angle of inclination of the tow-line.

Throughout these experiments both vessels remained at exactly the same draught of water, and during each trial the steam-pressure in the Monterey's boiler, the position of the throttle-valve of its engine, and all other conditions, were maintained as nearly constant as possible.

The speed of the launch was ascertained both by the shore-marks and by the Berthon tube, in the same manner as described by the preceding experiments on the propelling efficiency of the screws. The number of revolutions made by the screws, when revolving freely by the pressure of the water on the forward surface of their blades, was ascertained by a counter, in the manner described for the experiments already referred to. The same persons were employed in both sets of experiments, and were perfectly expert in making them. Nothing that could conduce to extreme accuracy was omitted. During these trials, the screw-shaft was disconnected from the crank-shaft of the launch's engines, so that in revolving it had only the friction of its journals and collars to overcome. Its stuffing-box, at the inboard end of the dead-wood, was packed barely sufficiently tight to prevent water-leakage.

The mean tension on the tow-line was obtained by dividing the straight base of each dynamometer-diagram into abscissæ of half an inch length, and erecting therefrom ordinates at right angles to the base, and cutting the curve of tensions. The mean length of these ordinates, measured by the scale of the spring, and multiplied by the leverage of the latter, gives the mean tension on the tow-line. The base-line of the diagram is described by revolving the cylinder without tension on the spring.

Each trial consisted of six runs over the base, three in each direction, and were made with the screws in the following positions, namely:

First. With screw A, 11 inches long in the direction of the axis, two-bladed, and of 5.136 feet pitch, six runs were made with the blades in a vertical position immediately behind the stern-post of the vessel, the latter having the speed of seven geographical miles per hour, as nearly as could be obtained. Then six runs were made with the blades at right angles to their former position—that is, horizontally or square across the vessel—at as nearly the speed of seven geographical miles per hour as could be obtained. Finally, the screw being allowed to freely revolve, six runs were made at the speed of seven geographical miles per hour, as nearly as could be obtained; after which six runs were made at each of the speeds of  $6\frac{1}{2}$ , 6, and  $5\frac{1}{2}$  geographical miles per hour, as nearly as could be obtained.

Second. With screw B, which was exactly the same as screw A, except that its length was  $8\frac{1}{2}$  inches in the direction of the axis instead of 11 inches, precisely the same set of trials was made as with screw A.

Third. With screw C, which was exactly the same as screw A, except that its length was  $5\frac{1}{2}$  inches in the direction of the axis, precisely the same set of trials was made as with screw A.

Fourth. With screw D, which was exactly the same as screw A, except that its length was  $3\frac{1}{2}$  inches in the direction of the axis, precisely the same set of trials was made as with screw A.



Fifth. With screw E, which was composed of four blades equispaced around the axis, the length of each blade in the direction of the axis being  $5\frac{1}{2}$  inches, and the pitch, surface, and diameter the same as those of screw A, six runs were made with two blades in the vertical position immediately behind the stern-post of the vessel, and the other two blades in the horizontal position or square across the vessel, the vessel's speed being 7 geographical miles per hour, as nearly as could be obtained. Then six runs were made with the blades of the screw standing at the angle of 45 degrees with the horizon, the speed of the vessel being 7 geographical miles per hour, as nearly as could be obtained. Finally, the screw being allowed to revolve freely, six runs were made at the speed of 7 geographical miles per hour, as nearly as could be obtained; after which six runs were made at each of the speeds of  $6\frac{1}{2}$ , 6, and  $5\frac{1}{2}$  geographical miles per hour, as nearly as could be obtained.

6th. With screw F, which was 11 inches long in the direction of its axis, and composed of four blades arranged in two pairs—the blades of each pair being directly opposite each other—and one pair placed immediately behind the other, so that when viewed in projection on a plane at right angles to the axis, the screw appeared to be two-bladed, six runs were made with the blades in a vertical position immediately behind the stern-post of the vessel, the latter having the speed of 7 geographical miles per hour as nearly as could be obtained. Then six runs were made with the blades at right angles to their former position—that is, horizontally or square across the vessel—at as nearly the speed of 7 geographical miles as could be obtained. Finally, the screw being allowed to revolve freely, six runs were made at the speed of 7 geographical miles per hour as nearly as could be obtained; after which six runs were made at each of the speeds of  $6\frac{1}{2}$ , 6, and  $5\frac{1}{2}$  geographical miles per hour, as nearly as could be obtained. Screw F is also known as the Mangin or duplex screw; and its pitch, surface, and diameter, were the same as those of screw A.

7th. With screw H, which was a three-bladed Griffith screw of 11 inches extreme length, and a pitch that expanded from  $6\frac{1}{2}$  feet to  $7\frac{1}{2}$  feet, the diameter being the same as that of screw A, six runs were made with one blade vertical *below* the shaft—that is, immediately behind the stern-post of the vessel—and the remaining two blades *above* the shaft at angles of 60 degrees from the vertical, the vessel's speed being 7 geographical miles per hour as nearly as could be obtained. Then six runs were made with one blade vertical *above* the shaft—that is, immediately behind the stern-post of the vessel—and the remaining two blades *below* the shaft at angles of 60 degrees from the vertical, the vessel's speed being 7 geographical miles per hour as nearly as could be obtained. Then, six runs were made with one blade horizontal—that is, square across the vessel on one side of the stern-post—and the remaining two blades on the other side of the stern-post at angles of 60 degrees from the vertical. Finally, the screw being allowed to revolve freely, six runs were made at the speed of 7 geographical miles per hour as nearly as could be obtained; after which six runs were made at each of the speeds of  $6\frac{1}{2}$ , 6, and  $5\frac{1}{2}$  geographical miles per hour, as nearly as could be obtained.

#### RESULTS.

*Of the resistance of the hull, per se, that is, its resistance without any screw attached.—* Steam-launch No. 4 was towed at all speeds from  $5\frac{1}{2}$  to  $7\frac{1}{2}$  geographical miles per hour, as nearly as could be obtained, increasing by one-fourth of a geographical mile per hour. Six runs were made at each speed, and the mean taken of the experimental speeds and of the corresponding dynamometer-diagrams. A comparison of these means with each other showed that, within the above limits, the resistance of the hull was in the ratio of the square of its speed; the extreme variation from this law on either side of the mean being only 2 per centum of the mean, and was as often greatest for the low speeds as for the high. *At the speed of 7 geographical miles per hour the resistance of the hull, as given by the mean of all the dynamometer-diagrams taken at all the different speeds, and reduced in the above proportion, is 631 pounds.*

When the steam-launch, instead of being towed, was propelled by its own screws, the resistance of its hull at the speed of 7 geographical miles per hour was 707 pounds; the difference in the two cases is consequently  $(707 - 631 =) 76$  pounds, or  $\left(\frac{76 \times 100}{707} =\right)$

10 $\frac{1}{2}$  per centum of the larger quantity. A part of this is due to the vessel's less draught of water when it was towed than when it was propelled by its own screws. In the former case its greatest immersed transverse section was 21.83 square feet; in the latter case 24.98 square feet; difference,  $\left(\frac{24.98 - 21.83 \times 100}{24.98} =\right)$  12.61 per centum of the

larger quantity. In the former case the area of the immersed external surface of the hull was 717 square feet; in the latter case 685 square feet; difference,  $\left(\frac{717 - 685 \times 100}{717} =\right)$

4.46 per centum of the larger quantity. In the former case the displacement was 23.3053 tons; in the latter case, 19.8420 tons; difference,  $\left(\frac{23.3053-19.8420 \times 100}{23.3053}=\right)$

14.86 per centum of the larger quantity. The mean of the three  $\left(\frac{12.61+4.46+14.86}{3}=\right)$

10.64 per centum, is almost the exact experimental difference of the resistance in the two cases.

*Results with screw D.*—This screw was two-bladed, and had the least surface of any employed in these trials; it is therefore convenient to first ascertain its results. The principal portion of its projected area on a plane at right angles to the axis is nearly masked or covered by the stern-post of the vessel when the two blades are placed vertically behind it.

With the blades of screw D held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 657 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 26 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance  $\left(\frac{26 \times 100}{631}=\right)$  4.12 per centum, and decreased

its speed ( $\sqrt{631} : \sqrt{657} :: 7 : 7.1428$ ; and  $7.1428 - 7. =$ ) 0.1428 geographical miles per hour, or  $\left(\frac{0.1428 \times 100}{7.1428}=\right)$  2 per centum.

With the blades of screw D held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw, at the speed of 7 geographical miles per hour, was 756 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remains for the resistance of the screw, *per se*, 125 pounds. Consequently, the screw, with its blades in the horizontal position, increased the vessel's resistance  $\left(\frac{125 \times 100}{631}=\right)$  19.81 per centum, and decreased its speed ( $\sqrt{631} : \sqrt{756} :: 7 : 7.6620$ ; and  $7.6620 - 7. =$ ) 0.6620 geographical miles per hour, or  $\left(\frac{0.6620 \times 100}{7.6620}=\right)$  8.64 per centum.

From the above it appears that screw D, when its blades were held in the horizontal position, square across the vessel, had  $\left(\frac{125}{26}=\right)$  4.808 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw D was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 757 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from  $5\frac{1}{4}$  to 7 geographical miles per hour. The axial speed of the screw was consequently  $\left(\frac{6086-5.136 \times 757 \times 100}{6086}=\right)$  36.12 per centum less than the speed of the vessel,

and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 2.528 geographical miles per hour. The revolutions of this screw were not uniform; the rotary speed fell off greatly as the blades came into the vertical position behind the stern-post of the vessel, at which point there was a decided hesitation in passing, after which the rotary speed increased. That speed appeared uniform for a considerable portion of the half revolution, the falling off occurring as the blades became masked by the stern-post, owing to their excessive narrowness in projection on a plane at right angles to their axis.

With the vessel at the speed of seven geographical miles per hour, and screw D revolving freely, the aggregate resistance of vessel and screw was 685 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 54 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance  $\left(\frac{54 \times 100}{631}=\right)$  8.56 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{685} :: 7 : 7.2934$ ; and  $7.2934 - 7. =$ ) 0.2934 geographical mile per hour, or  $\left(\frac{0.2934 \times 100}{7.2934}=\right)$  4.02 per centum.

When a two-bladed screw has so small a fraction of the pitch as screw D, namely, 0.1014, whereby its blades are nearly masked by the vessel's stern-post, it appears that the resistance due to the screw when revolving freely is 2 per centum of the resistance of the vessel, *per se*, more than when it is held stationary with its blades behind the stern-post in the vertical position; but 3 per centum less than when it is held stationary with its blades in the horizontal position, square across the vessel. The resistance



of the revolving screw in this case is greater, proportionally, than when a larger fraction of the screw is used, owing to its making a less number of revolutions per mile in consequence of the falling off of its rotary speed as its blades pass the stern-post.

*Results with screw C.*—This screw was two-bladed, and had the next greatest surface to screw D. Their surfaces compared as  $3\frac{1}{2}$  to  $5\frac{1}{2}$ , and were of exactly the same kind. A considerable portion of the surface of screw C projected on each side of the vessel's stern-post when the blades were in the vertical position.

With the blades of screw C held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 721 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 90 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance  $\left(\frac{90 \times 100}{631} =\right)$  14.26 per centum; and decreased the speed ( $\sqrt{631} : \sqrt{721} :: 7 : 7.4826$ ; and  $7.4826 - 7 =$ ) 0.4826 geographical miles per hour, or  $\left(\frac{0.4826 \times 100}{7.4826} =\right)$  6.45 per centum.

With the blades of screw C held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 851 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remains for the resistance of the screw, *per se*, 220 pounds. Consequently, the screw with its blades in the horizontal position, increased the vessel's resistance  $\left(\frac{220 \times 100}{631} =\right)$  34.86 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{851} :: 7 : 8.1292$ ; and  $8.1292 - 7 =$ ) 1.1292 geographical miles per hour, or  $\left(\frac{1.1292 \times 100}{8.1292} =\right)$  13.89 per centum.

From the above, it appears that screw C, when its blades were held in the horizontal position, square across the vessel, had  $\left(\frac{220}{90} =\right)$  2.444 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw C was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from  $5\frac{1}{2}$  to 7 geographical miles per hour. The axial speed of the screw was consequently  $\left(\frac{6086 - 5.136 \times 921 \times 100}{6086} =\right)$  22.28 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw C revolving freely, the aggregate resistance of vessel and screw was 698 pound; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw *per se*, 67 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance  $\left(\frac{67 \times 100}{631} =\right)$  10.62 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{698} :: 7 : 7.3623$ ; and  $7.3623 - 7 =$ ) 0.3623 geographical mile per hour, or  $\left(\frac{0.3623 \times 100}{7.3623} =\right)$  4.92 per centum.

From the foregoing it appears that the resistance due to screw C, when revolving freely, is 3.64 per centum of the resistance of the vessel, *per se*, less than where it is held stationary with its blades behind the stern-post in the vertical position; and 24.24 per centum less than when it is held stationary with its blades in the horizontal position, square across the vessel.

*Results with screw B.*—This screw was two-bladed, and had the next greatest surface to screw C. Their surfaces compared as  $5\frac{1}{2}$  to  $8\frac{1}{2}$ , and were of exactly the same kind.

With the blades of screw B held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 828 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 197 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance  $\left(\frac{197 \times 100}{631} =\right)$  31.22 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{828} :: 7 : 8.0186$ ; and  $8.0186 - 7 =$ ) 1.0186 geographical miles per hour, or  $\left(\frac{1.0186 \times 100}{8.0186} =\right)$  12.73 per centum.

With the blades of screw B held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 976 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 345 pounds. Consequently, the screw, with its blades in the horizontal position, increased the vessel's resistance  $\left(\frac{345 \times 100}{631} =\right)$  54.68 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{976} :: 7 : 8.7058$ ; and  $8.7058 - 7. =$ ) 1.7058 geographical miles per hour, or  $\left(\frac{1.7058 \times 100}{8.7058} =\right)$  19.59 per centum.

From the above it appears that screw B, when its blades were held in the horizontal position, square across the vessel, had  $\left(\frac{345}{197} =\right)$  1.751 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw B was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from  $5\frac{1}{2}$  to 7 geographical miles per hour. The axial speed of the screw was consequently  $\left(\frac{6086 - 5.136 \times 921 \times 100}{6086} =\right)$  22.28 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw B revolving freely, the aggregate resistance of vessel and screw was 736 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 105 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance  $\left(\frac{105 \times 100}{631} =\right)$  16.64 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{736} :: 7 : 7.5600$ ; and  $7.5600 - 7. =$ ) 0.5600 geographical mile per hour, or  $\left(\frac{0.5600 \times 100}{7.5600} =\right)$  7.41 per centum.

From the foregoing it appears that the resistance due to screw B, when revolving freely, is 14.58 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with its blades behind the stern-post in the vertical position; and 33.04 per centum less than when it is held stationary with its blades in the horizontal position, square across the vessel.

*Results with screw A.*—This screw was two-bladed, and had exactly double the surface of screw C, the surfaces of both being of exactly the same kind.

With the blades of screw A held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 981 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 350 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance  $\left(\frac{350 \times 100}{631} =\right)$  55.47 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{981} :: 7 : 8.7281$ ; and  $8.7281 - 7. =$ ) 1.7281 geographical miles per hour, or  $\left(\frac{1.7281 \times 100}{8.7681} =\right)$  19.80 per centum.

With the blades of screw A held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 1,071 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 440 pounds. Consequently, the screw, with its blades in the horizontal position, increased the vessel's resistance  $\left(\frac{440 \times 100}{631} =\right)$  69.73 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{1071} :: 7 : 9.1196$ ; and  $9.1196 - 7. =$ ) 2.1196 geographical miles per hour, or  $\left(\frac{2.1196 \times 100}{9.1196} =\right)$  23.24 per centum.

From the above it appears that screw A, when its blades were held in the horizontal position, square across the vessel, had  $\left(\frac{440}{350} =\right)$  1.257 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw A was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which num-

ber was not affected by the speed of the vessel, but remained constant for all speeds from  $5\frac{1}{2}$  to 7 geographical miles per hour. The axial speed of the screw was consequently  $\left( \frac{6086 - 5.136 \times 921 \times 100}{6086} = \right)$  22.28 per centum less than the speed of the vessel, and

when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position.

With the vessel at the speed of 7 geographical miles per hour, and screw A revolving freely, the aggregate resistance of vessel and screw was 765 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 134 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance  $\left( \frac{134 \times 100}{631} = \right)$  21.24 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{765} :: 7 : 7.7075$ ; and  $7.7075 - 7 =$ ) 0.7075 geographical mile per hour, or  $\left( \frac{0.7075 \times 100}{7.075} = \right)$  9.18 per centum.

From the foregoing it appears that the resistance due to screw A, when revolving freely, is 34.23 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with its blades behind the stern-post in the vertical position; and 48.49 per centum less than when it is held stationary with its blades in the horizontal position, square across the vessel.

*Results with screw E.*—This screw was four-bladed, with the blades equispaced around the axis. Each blade was exactly the same as one of the blades of screw C, so that screw E had the same kind of surface as screw C, and just double the quantity.

With screw E held stationary in such position that two of its blades were vertical and immediately behind the stern-post of the vessel, the other two being horizontal and square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 941 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, 310 pounds. Consequently, the screw, with its blades in the above position, increased the vessel's resistance  $\left( \frac{310 \times 100}{631} = \right)$  49.13 per centum; and decreased its speed ( $\sqrt{631} :$

$\sqrt{941} :: 7 : 8.5483$ ; and  $8.5483 - 7 =$ ) 1.5483 geographical miles per hour, or  $\left( \frac{1.5483 \times 100}{8.5483} = \right)$  15.11 per centum.

With screw E held stationary in such position that all its blades stand at the angle of 45 degrees with the horizon, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 968 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 337 pounds. Consequently, the screw, with its blades in the above position, increased the vessel's resistance  $\left( \frac{337 \times 100}{631} = \right)$  22.24 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{968} :: 7 : 8.6696$ ; and  $8.6696 - 7 =$ ) 1.6696 geographical miles per hour, or  $\left( \frac{1.6696 \times 100}{8.6696} = \right)$  19.26 per centum.

From the above it appears that screw E, when its blades were held at the angle of 45 degrees with the horizon, had  $\left( \frac{337}{310} = \right)$  1.087 times the resistance it had when two of

its blades were held in the vertical position immediately behind the vessel's stern-post and the remaining two blades in the horizontal position square across the vessel.

When screw E was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from  $5\frac{1}{2}$  to 7 geographical miles per hour. The axial speed of the screw was consequently

$\left( \frac{6086 - 5.136 \times 921 \times 100}{6086} = \right)$  22.28 per centum less than the speed of the vessel; and

when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw E revolving freely, the aggregate resistance of vessel and screw was 765 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resist-

ance of the screw, *per se*, 134 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance  $\left(\frac{134 \times 100}{631} =\right)$  21.24 per centum and decreased its speed ( $\sqrt{631} : \sqrt{765} :: 7 : 7.7075$ ; and  $7.7075 - 7. =$ ) 0.7075 geographical mile per hour, or  $\left(\frac{0.7075 \times 100}{7.7075} =\right)$  9.18 per centum.

From the foregoing it appears that the resistance due to screw E, when revolving freely, is 27.89 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with two of its blades in the vertical position behind the vessel's stern-post, and the remaining two in the horizontal position, square across the vessel; and 32.17 per centum less than when it is held stationary with its blades at the angle of 45 degrees with the horizon.

*Results with screw F.*—This screw (sometimes called the Mangin screw and sometimes the duplex screw) was four-bladed, and consisted of two pairs of blades placed one immediately behind the other, so that when viewed in projection on a plane at right angles to axis, it appeared as a two-bladed screw with the blades directly opposite each other. Each blade was exactly the same as one of the blades of screw C, so that screw F had the same kind of surface as screw C, and just double the quantity.

With the blades of screw F held stationary in the vertical position, immediately behind the stern-post of the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 721 pounds; deducting from which the 631 pounds due to the resistance of the vessel there remains for the resistance of the screw, *per se*, 90 pounds. Consequently, the screw, with its blades in the vertical position, increased the vessel's resistance  $\left(\frac{90 \times 100}{631} =\right)$  14.26 per centum, and decreased its speed ( $\sqrt{631} : \sqrt{721} :: 7 : 7.4826$ ; and  $7.4826 - 7. =$ ) 0.4826 geographical mile, or  $\left(\frac{0.4826 \times 100}{7.4826} =\right)$  6.45 per centum.

With the blades of screw F held stationary in the horizontal position, square across the vessel, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 851 pounds; deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 220 pounds. Consequently, the screw, with its blades in the horizontal position increased the vessel's resistance  $\left(\frac{220 \times 100}{631} =\right)$  34.86 per centum, and decreased its speed ( $\sqrt{631} : \sqrt{851} :: 7 : 8.1292$ ; and  $8.1292 - 7 =$ ) 1.1292 geographical miles per hour, or  $\left(\frac{1.1292 \times 100}{8.1292} =\right)$  13.89 per centum.

From the above it appears that screw F, when its blades were held in the horizontal position, square across the vessel, had  $\left(\frac{220}{90} =\right)$  2.444 times the resistance it had when its blades were held in the vertical position, immediately behind the vessel's stern-post.

When screw F was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 921 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from  $5\frac{1}{2}$  to 7 geographical miles per hour. The axial speed of the screw was consequently  $\left(\frac{6086 - 5.136 \times 921 \times 100}{6086} =\right)$  22.28 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.559 geographical miles per hour. The revolutions of this screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position, behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw F revolving freely, the aggregate resistance of vessel and screw was 698 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 67 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance  $\left(\frac{67 \times 100}{631} =\right)$  10.62 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{698} :: 7 : 7.3623$ ; and  $7.3623 - 7. =$ ) 0.3623 geographical mile per hour, or  $\left(\frac{0.3623 \times 100}{7.3623} =\right)$  4.92 per centum.

From the foregoing it appears that the resistance due to screw F when revolving freely is 3.64 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with its blades behind the stern-post in the vertical position; and 24.24 per centum less than when it is held stationary with its blades in the horizontal position square across the vessel.



*Results with screw H.*—This screw has a large globular hub, and three blades cut to the pear-shape, which forms the Griffith screw. It has the same diameter as the previously-described screws, but its pitch is greater and expands gradually from the forward to the after edge of the blades.

With the blades of screw H held stationary in such position that one blade was vertical *below* the shaft and immediately behind the stern-post of the vessel, the remaining two blades being *above* the shaft and at angles of 60 degrees with the perpendicular, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour, was 914 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw *per se*, 283 pounds. Consequently, the screw, with its blades in the above position, increased the vessel's resistance  $\left(\frac{283 \times 100}{631} =\right)$  44.85 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{914} :: 7 : 8.4247$ ; and  $8.4247 - 7 =$ ) 1.4247 geographical miles, or  $\left(\frac{1.4247 \times 100}{8.4247} =\right)$  16.91 per centum.

With the blades of screw H held stationary in such position that one blade was vertical *above* the shaft and immediately behind the stern-post of the vessel, the remaining two blades being *below* the shaft and at angles of 60 degrees with the perpendicular, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 992 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 361 pounds. Consequently, the screw with its blades in the above position, increased the vessel's resistance  $\left(\frac{361 \times 100}{631} =\right)$  57.21 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{992} :: 7 : 8.7768$ ; and  $8.7768 - 7 =$ ) 1.7768 geographical mile, or  $\left(\frac{1.7768 \times 100}{8.7768} =\right)$  20.24 per centum.

With the blades of screw H held stationary in such position that one blade was horizontal, square across the vessel on one side of the stern-post, the remaining two blades being on the opposite side of the stern-post and at angles of 30 degrees with the perpendicular, the aggregate resistance of the vessel and screw at the speed of 7 geographical miles per hour was 962 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 331 pounds. Consequently, the screw with its blades in the above position, increased the vessel's resistance  $\left(\frac{331 \times 100}{631} =\right)$  52.46 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{962} :: 7 : 8.6431$ ; and  $8.6431 - 7 =$ ) 1.6431 geographical miles, or  $\left(\frac{1.6431 \times 100}{8.6431} =\right)$  19.09 per centum.

From the above it appears that screw H, when one of its blades was held stationary in the vertical position *above* the shaft immediately behind the stern-post of the vessel, had  $\left(\frac{361}{283} =\right)$  1.276 times the resistance it had when its blades were held in exactly the reverse position, that is to say, when one of its blades was vertical *below* the shaft immediately behind the stern-post. When one of the blades was held horizontally, square across the vessel on one side of the stern-post, while the other two blades were on the opposite side at angles of 30 degrees from the perpendicular, the resistance of the screw (331 pounds) was but a little over the mean  $\left(\frac{283 \times 361}{2} = 322 \text{ pounds}\right)$  of its resistances with one blade vertical alternately above and below the shaft.

When screw H was allowed to revolve freely by the pressure of the water on the forward face of its blades, it made 665 revolutions per geographical mile, which number was not affected by the speed of the vessel, but remained constant for all speeds from  $5\frac{1}{2}$  to 7 geographical miles per hour. The axial speed (for mean pitch) of the screw was consequently  $\left(\frac{6086 - 7 \times 665 \times 100}{6086} =\right)$  23.51 per centum less than the speed of the vessel, and when the latter was 7 geographical miles per hour, the screw was dragged bodily through the water at the speed of 1.6459 geographical miles per hour. The revolutions of the screw were uniform, and there was no appearance of hesitation when the blades came into the vertical position behind the stern-post of the vessel.

With the vessel at the speed of 7 geographical miles per hour, and screw H revolving freely, the aggregate resistance of vessel and screw was 756 pounds, deducting from which the 631 pounds due to the resistance of the vessel, there remain for the resistance of the screw, *per se*, 125 pounds. Consequently, the screw, when revolving freely, increased the vessel's resistance  $\left(\frac{125 \times 100}{631} =\right)$  19.81 per centum; and decreased its speed ( $\sqrt{631} : \sqrt{756} :: 7 : 7.6620$ ; and  $7.6620 - 7 =$ ) 0.6620 geographical mile per hour, or  $\left(\frac{0.6620 \times 100}{7.6620} =\right)$  8.64 per centum.

From the foregoing it appears that the resistance due to screw H when revolving freely, is 25.04 per centum of the resistance of the vessel, *per se*, less than when it is held stationary with one blade vertical *below* the shaft, immediately behind the vessel's stern-post; 37.40 per centum less than when it is held stationary with one blade vertical *above* the shaft, immediately behind the stern-post; and 32.65 per centum less than when it is held stationary with one blade horizontal, square across the vessel, on one side of the stern-post, while the remaining two blades are on the opposite side at angles of 30 degrees from the perpendicular.

*General conclusions.*—From the results of the preceding experiments made to determine the relative resistances of the screws of steam-launch No. 4 when dragged through the water in various positions and under different conditions, the following general conclusions can be drawn:

1st. All the screws experimented with continued to revolve until the vessel's speed fell below  $3\frac{1}{2}$  geographical miles per hour.

2d. That with the exception of the extreme case in which a two-bladed screw is employed, composed of such small fraction of the pitch that its projected area on a plane at right angles to the axis is covered or masked by the stern-post of the vessel, the two-bladed screws gave much less resistance when revolving freely than when held stationary with their blades in the vertical position immediately behind the stern-post of the vessel.

3d. That even in the extreme case above excepted, and which never occurs in practice, the resistance of the two-bladed screw when held stationary with its blades in the vertical position immediately behind the stern-post of the vessel, was only 2 per centum less than when revolving freely. And that this slightly less resistance was due to the fact that, because it was masked by the stern-post, owing to the extremely small fraction of the pitch of which it was composed, it made, when revolving freely, fewer revolutions per minute than it would have made if composed of a larger fraction of the pitch, and consequently had to be dragged bodily through the water at a higher speed.

4th. That the resistance of the two-bladed screws when their blades were held stationary in the vertical position immediately behind the vessel's stern-post, was much less, for all the fractions of pitch employed, than when they were held stationary in the horizontal position square across the vessel. And that this difference of the resistances in the two positions became less and less as the screws were composed of greater and greater fractions of the pitch, all other things being the same.

5th. That in the case of screws otherwise identical, except that the surface in the one was divided into two blades, while in the other it was divided into four blades equispaced around the axis, the two-bladed screw when held stationary with its blades in the vertical position immediately behind the vessel's stern-post, gave a much less resistance at equal speed of vessel than the four-bladed screw when held stationary with two of its blades in the vertical and the other two in the horizontal position.

6th. The two-bladed screw under the conditions of 5th, also gave a much less resistance than the four-bladed screw with its blades equispaced around the axis, and held stationary at the angle of 45 degrees with the perpendicular.

7th. The two-bladed screws, when held stationary with their blades in the horizontal position square across the vessel, gave resistances, at equal speed of vessel, in the direct ratio of the fraction of pitch of which they were composed, all other things being the same.

8th. The two-bladed screws, when held stationary with their blades in the vertical position immediately behind the stern-post of the vessel, gave, at equal speed of vessel, resistances increasing with the fraction of pitch of which they were composed, other things being the same. The ratio of this increase in function of fraction of pitch, the experiments were not sufficiently numerous and varied to determine.

9th. The two-bladed screws, with the exception of the extreme case in which a two-bladed screw is employed composed of such small fraction of the pitch that its projected area on a plane at right angles to the axis is covered or masked by the stern-post of the vessel, gave, when freely revolving, resistances in the direct ratio of the fractions of the pitch of which they were composed, all other things being the same.

10th. That with the exception of the extreme case above defined, the two-bladed screws, *ceteris paribus*, composed of whatever fraction of the pitch they might be, make, when revolving freely, at any speed of vessel greater than  $3\frac{1}{2}$  geographical miles per hour, the same number of revolutions per mile. As the product of this number of revolutions and the pitch in feet is always less by a constant quantity than the geographical mile in feet, the two-bladed screws, composed of whatever fraction of the pitch they might be, are, for equal speed of vessel, dragged bodily at equal speed through the water.

11th. That in the extreme case above excepted, the two-bladed screw of such small fraction of the pitch that its blades are masked or covered by the stern-post of the vessel, makes, when revolving freely, the same number of revolutions per mile at all speeds of vessel above  $3\frac{1}{2}$  geographical miles per hour; but this number is less than



when the fraction of the pitch is greater, and this screw is consequently dragged bodily through the water at a greater speed than in that case, and has a corresponding greater resistance in proportion to its fraction of pitch.

12th. The four-bladed screw with its blades equispaced around the axis and held stationary at angles of 45 degrees with the perpendicular, gave 8.7 per centum more resistance than when it was held stationary with two of its blades in the vertical position and the remaining two in the horizontal position. The above proportion, however, is only true for the particular fraction of pitch of which this screw was composed. It will become less for greater fractions and more for smaller ones. It nevertheless shows that the resistance of a blade, even when at the angle of 45 degrees with the perpendicular, is much less than when in the horizontal position. Had the resistance of the blade in both these cases been equal, the resistance of the screw, with its blades at the angle of 45 degrees with the perpendicular, would have been 440 pounds when the vessel had the speed of 7 geographical miles per hour, whereas the experimental resistance at that speed was only 337 pounds, or 76.6 per centum of the former. The difference strikingly illustrates the effect exercised upon the resistance of the blade by the proximity of the hull.

13th. The four-bladed screw with its blades equispaced around the axis, gave a much less resistance when revolving freely than when held stationary in any position. And when identical with the two-bladed screw in all respects except the number of blades into which the same surface was divided, it gave, when revolving freely, exactly the same resistance as the two-bladed screw when revolving freely at the same speed of vessel.

14th. The above four-bladed screw makes, when revolving freely at any speed of vessel greater than  $3\frac{1}{2}$  geographical miles per hour, the same number of revolutions per mile; and this number is exactly the same as that made under the same conditions by a two-bladed screw of the same diameter and pitch, with a fraction of pitch sufficiently great not to be masked by the vessel's stern-post. As the product of this number of revolutions and the pitch in feet is always less by a constant quantity than the geographical mile in feet, the four-bladed screw is dragged bodily through the water at a speed which is always the same per centum of the vessel's speed, let the latter be what it may.

15th. The Mangin screw composed of two identical two-bladed screws placed one immediately behind the other, so that, when viewed in projection on a plane at right angles to axis, it appears like a single two-bladed screw, gave, at equal speed of vessel, when of the same diameter, pitch, and *projected area* on a plane at right angles to the axis as the two-bladed screw, exactly the same resistance as the latter under all the conditions of being held stationary with the blades in the vertical position immediately behind the vessel's stern-post, of being held stationary with the blades in the horizontal position square across the vessel, and of revolving freely. But the Mangin screw, composed as above, has double the fraction of pitch and double the surface of the two-bladed screw above described; consequently, while its propelling efficiency will be greater than that of the two-bladed screw in the ratio of the square root of 2 to the square root of 1, its resistance at equal speed of vessel when dragged with its blades held stationary in any position, or revolving freely, will be only one-half of that of the two-bladed screw.

16th. In the cases of a two-bladed screw, a four-bladed screw, and a Mangin screw, all three having the same diameter, pitch, and fraction of pitch, or, in other words, being identical except as to number and arrangement of blades, their propelling efficiencies in smooth water are equal, but their resistances when dragging at equal speeds of vessel are very different. When these screws are revolving freely the resistances of the two-bladed and four-bladed are equal, while the resistance of the Mangin screw is only one-half of that of either. When these screws are held stationary and dragged through the water, the resistances, at equal speed of vessel, of the two-bladed screw and of the Mangin screw with their blades in the vertical position immediately behind the vessel's stern-post, and of the four-bladed screw with two of its blades in the vertical and the other two in the horizontal position, these positions for the three screws being those in which they have the least resistance when held stationary, compare as 100 for the Mangin screw, 219 for the two-bladed screw, and 344 for the four-bladed screw. As regards the latter, however, this proportion is true only for the particular fraction of pitch (0.3570) of which these screws were composed. With larger fractions of the pitch the resistance of the two-bladed and four-bladed screws would be relatively less, and with smaller fractions of the pitch it would be relatively more, but in a higher degree for the four-bladed than for the two-bladed screw.

All these screws give the same number of revolutions per mile when revolving freely so long as the projected area of the Mangin screw on a plane at right angles to the axis is sufficiently large not to be covered or masked by the vessel's stern-post, and this number is constant at all speeds of vessel above three and a half geographical miles per hour, at which revolution ceased.

17th. The Griffith screw, though of the same diameter as the others, had a pitch

so different in kind and dimensions, and blades so different in number and shape, that no comparison can be made with them. There can only be drawn the general conclusion, that screws with larger pitches when revolving freely, make fewer revolutions per mile and have the product of that number of revolutions and the pitch in feet a greater proportion of the mile in feet than screws of smaller pitches.

18th. The foregoing conclusions, though qualitatively exact for the kind of screws experimented with, let their absolute dimensions of diameter, pitch, and fraction of pitch, be what they may, so long as these remain the same for all, and let them be applied to what form or dimensions of vessels they may, yet quantitatively will be modified by all the circumstances just enumerated, with the exception that whether the same kind and quantity of surface be arranged in two blades, four blades equispaced around the axis, or four blades with two immediately behind the other two, as in the Mangin screw, the resistance when dragging and revolving freely will be as stated in 16th; and that they will all make the same number of revolutions per mile of the vessel's speed.

In the following Table No. 1, will be found the dimensions of the experimental screws, which, though given in the preceding report on their propelling efficiencies, are here re-inserted for convenience of reference.

In the succeeding Table No. 2, will be found collected under appropriate headings, the numerical results of the experiments made with the screws dragging under various conditions.

Table No. 1, containing the principal dimensions of the screws employed in the foregoing experiments.

Designation of the screws.	Diameter, in feet.	Diameter of hub, in feet.	Pitch, in feet.	Number of blades.	Length of each blade in direction of axis, in feet.	Fraction used of the pitch.	Projected area of the blades on a plane at right angles to axis, in square feet.	Helicoidal area of the blades, in square feet.
A .....	4.3333	0.50	5.136	2	0.9167	0.3570	5.1950	6.1321
B .....	4.3333	0.50	5.136	2	0.7187	0.2799	4.0730	4.8578
C .....	4.3333	0.50	5.136	2	0.4583	0.1785	2.0975	2.0681
D .....	4.3333	0.50	5.136	2	0.2604	0.1014	1.4755	1.7417
E .....	4.3333	0.50	5.136	4	0.4583	0.3570	5.1950	6.1321
F* .....	4.3333	0.50	5.136	4	0.4583	0.3570	5.1950	6.1321
H† .....	4.3333	1.25	7.000	3	10.9167	50.2034	2.7495	4.2962

\* Mangin or duplex screw.

† Maximum.

‡ Griffith screw, with expanding pitch from 6½ feet to 7½ feet.

§ Calculated for the mean pitch of 7 feet.

Table No. 2, containing the results of the trials made to ascertain the dynamometrical resistances of the experimental screws of the United States steam-launch No. 4, when it was towed by the steamer Monterey, with the screws dragging under the different conditions of rotating freely by the pressure of the water on the forward side of their blades, and of being held stationary in different positions.

Kind of screw and conditions of its trials.	Designation of the screws.	Speed.				Resistances.				Loss of vessel's speed due to the drag of the screw.			
		Speed of the vessel, in geographical miles per hour.	Number of revolutions made by the screw per geographical mile.	Speed of the screw, in geographical miles per hour, calculated from the pitch and the revolutions.	Difference, in per centum of the speed of the vessel, between the speed of the vessel and the speed of the screw.	Resistance of the vessel alone—i. e., without any screw—in pounds per dynamometer.	Resistance of the screw alone, in pounds per dynamometer.	Aggregate resistance of vessel and screw, in pounds per dynamometer.	Resistance of the screw, in per centum of the resistance of the vessel alone.	Speed, in geographical miles per hour, that the vessel would have had with the screw removed, had the vessel been towed by the pull of the aggregate resistance of vessel and screw by dynamometer.	Loss of speed in geographical miles per hour, due to the resistance of the screw.	Loss of speed due to the resistance of the screw, in per centum of the speed the vessel would have had with the screw removed, had the vessel been towed by the pull of the aggregate resistance of vessel and screw by dynamometer.	
2-bladed screw: Revolving freely by the pressure of the water Held stationary, with the blades vertical behind the stern-post. Held stationary, with the blades horizontal, square across the vessel	A	7	921	5.441	92.28	631	134	765	21.24	7.7075	0.7075	9.18	
	A	7	.....	.....	.....	631	350	981	55.47	8.7281	1.7281	19.90	
	A	7	.....	.....	.....	631	440	1,071	69.73	9.1196	2.1196	32.24	
2-bladed screw: Revolving freely by the pressure of the water Held stationary, with the blades vertical behind the stern-post. Held stationary, with the blades horizontal, square across the vessel	B	7	921	5.441	92.28	631	105	736	16.64	7.5000	0.5000	7.41	
	B	7	.....	.....	.....	631	197	828	31.92	8.0186	1.0186	12.73	
	B	7	.....	.....	.....	631	345	976	54.68	8.7058	1.7058	19.59	
2-bladed screw: Revolving freely by the pressure of the water Held stationary, with the blades vertical behind the stern-post. Held stationary, with the blades horizontal, square across the vessel	C	7	921	5.441	92.28	631	67	698	10.02	7.3623	0.3623	4.02	
	C	7	.....	.....	.....	631	90	721	14.26	7.4826	0.4826	6.45	
	C	7	.....	.....	.....	631	223	851	34.06	8.1292	1.1292	13.89	
2-bladed screw: Revolving freely by the pressure of the water Held stationary, with the blades vertical behind the stern-post. Held stationary, with the blades horizontal, square across the vessel	D	7	757	4.472	36.12	631	54	685	8.56	7.5234	0.5234	4.02	
	D	7	.....	.....	.....	631	26	657	4.12	7.1428	0.1428	2.00	
	D	7	.....	.....	.....	631	125	756	19.81	7.6620	0.6620	6.64	
6 of the water " blades vertical and other horizontal " at the angle of 45 degrees with the vertical	E	7	921	5.441	92.28	631	134	765	21.24	7.7075	0.7075	9.12	
	E	7	.....	.....	.....	631	310	941	49.13	8.5483	1.5483	18.11	
	E	7	.....	.....	.....	631	337	968	52.41	8.6890	1.6890	19.26	

Table No. 2, containing the results of the trials made, &c.—Continued.

Kind of screw and conditions of its trials.	Designation of the screws.	Speed.				Resistance.				Loss of vessel's speed due to the drag of the screw.		
		Speed of the vessel, in geographical miles per hour.	Number of revolutions made by the screw per geographical mile.	Speed of the screw, in geographical miles per hour, calculated from the pitch and the revolutions.	Difference, in per centum of the speed of the vessel, between the speed of the vessel and the speed of the screw.	Resistance of the vessel alone—i. e., without any screw—in pounds per dynamometer.	Resistance of the screw alone, in pounds per dynamometer.	Aggregate resistance of vessel and screw, in pounds per dynamometer.	Resistance of the screw, in per centum of the resistance of the vessel alone.	Speed, in geographical miles per hour, that the vessel would have had with the screw removed, had the vessel been towed by the pull of the aggregate resistance of vessel and screw by dynamometer.	Loss of speed in geographical miles per hour, due to the resistance of the screw.	Loss of speed due to the resistance of the screw, in per centum of the speed the vessel would have had with the screw removed, had the vessel been towed by the pull of the aggregate resistance of vessel and screw by dynamometer.
4-bladed screw, Mangin's system: Revolving freely by the pressure of the water. Held stationary, with the blades vertical behind the stern-post. Held stationary, with the blades horizontal, square across the vessel.	F	7	921	5.441	22.28	631	67	698	10.62	7.3623	0.3623	4.92
	F	7	.....	.....	.....	631	90	721	14.26	7.4826	0.4826	6.45
	F	7	.....	.....	.....	631	220	851	34.86	8.1292	1.1292	13.89
3-bladed screw, Griffith's system: Revolving freely by the pressure of the water. Held stationary, with one blade placed vertically below the shaft, and the remaining two blades above the shaft at angles of 60 degrees from the vertical. Held stationary, with one blade placed vertically above the shaft, and the remaining two blades below the shaft at angles of 60 degrees from the vertical. Held stationary, with one blade placed horizontally on one side of the vessel's stern-post, and the remaining two blades on the other side at angles of 60 degrees from the vertical.	H	7	665	5.3541	23.51	631	125	756	19.81	7.6620	0.6620	8.64
	H	7	.....	.....	.....	631	283	914	44.85	8.4247	1.4247	16.91
	H	7	.....	.....	.....	631	361	992	57.21	8.7768	1.7768	20.24
	H	7	.....	.....	.....	631	331	962	52.46	8.6431	1.6431	19.01

Kind of screw and conditions of its trials.

Very respectfully, your obedient servant,  
B. F. ISHERWOOD, Chief Engineer.

To Engineer-in-Chief Wm. W. Wood, U. S. N.,  
Chief of the Bureau of Steam-Engineering, Navy Department.

NOVEMBER 21, 1874.

## C.

UNITED STATES STEAMER JUNIATA, (3d rate,)

*At Sea, Latitude 40° 22' North, Longitude 78° 35' West, October 24, 1873.*

SIR: I have the honor to inform you that I have on board this ship eleven (11) bags of coal, about 150 pounds to the bag, which was mined by a party from this ship at the Waigat Straits, on the north side of Disco Island, Greenland.

Thinking you might desire to test its quality, I hold it at your disposition.

I have furnished the honorable Secretary of the Navy with information in regard to the coal and mines.

Very respectfully, your obedient servant,

D. L. BRAINE,

*Commander U. S. N., Commanding United States Steamer Juniata.*

Engineer-in-Chief W. W. W. WOOD, U. S. N.,

*Chief of the Bureau of Steam-Engineering, Navy Department, Washington, D. C.*

NEW YORK, 236 WEST FOURTH STREET,

April 13, 1874.

DEAR SIR: In accordance with my promise, I herewith lay before you the result of an analysis of the Greenland coal which you were kind enough to furnish me some two months ago. Specimens of the coal were given for analysis to two of our most accurate chemists, Prof. Henry Wurtz, of Hoboken, editor of the Gas-Light Journal, and Professor Newton, of the Columbia College Mining-School. The result of examination by the former of them is herewith presented. It is perhaps unnecessary for me to say that Professor Wurtz is unsurpassed in the accuracy of his analysis by any chemist in our country, and his name is authoritative with all who know him. He is, moreover, particularly familiar with the chemistry of the hydrocarbons, having been required, in his capacity of editor of the Gas-Light Journal, to investigate those substances very thoroughly. His statement of results may, therefore, be confidently relied upon.

The other analysis is made, but has not yet been furnished me. I will endeavor to forward it as soon as it is received.

Very gratefully, yours,

BENJ. N. MARTIN.

WM. W. W. WOOD, Esq.,  
*Chief Engineer, U. S. N.*

## LIGNITE.

Brought by the United States steamer Juniata, in 1873, from Disco Island, on the west coast of Greenland.

This material is black in the mass, but when in powder brownish. It shrinks and becomes full of fissures in dry air. It is composed of a mixture of a dull mineral charcoal and a lustrous resinoid material, with much the aspect of the lustrous component of caking coals, but less brilliant. These two ingredients are irregularly interlaminated. My sample contained one granule of fossil resin, of the size of a grain of wheat, amber-colored and transparent, which fused when heated, and then gave off a clear yellow oil, with an odor like oil of amber.

After drying the lignite in small fragments for some days, in a dry winter atmosphere, it was operated on according to the customary mode of "crucible analysis" for coals, and yielded—

Water .....	14.00
Volatile matter.....	35.38
Coke, containing { carbon.....	41.79
{ ash .....	8.23
	<hr/>
	100.00

During the expulsion of the volatile portion, the flame was pale-yellow, without smoke or soot. This would apparently indicate but little candle-power for the gas; but it is not conclusive, as the steam given off must greatly modify the flame. If the above proportion of volatile matter still holds in the *dehydrated* lignite, the latter would equal in this respect a rich gas-coal, having over 41 per cent. of volatile matter. This point would be worthy of determination, in view of the value of a gas-coal in those dark latitudes. The amount of my sample was much too small to admit of any experiments in gas-making. The water requires for its expulsion from the mineral only the

heat of a sand-bath, and when it has been expelled I have found that the powder of the mineral acquires a somewhat *pyrophoric* quality, taking fire when heated at a temperature much below redness.

During the coking of this lignite in small fragments, these shrink in volume, *without change of form*, at least 40 per cent.; and the coke contains portions greatly resembling anthracite. This fact proves that a powerful and valuable fuel may be obtained by coking. Sulphur was present in this coke to a small but undetermined extent. The little masses of ash left by the complete combustion of the fragments were variegated in color, some having a curious *greenish* tinge, which was supposed to be due to manganese; but blow-pipe tests made subsequently have failed to detect that metal. This ash contains some lime, (with very little magnesia,) though it does not effervesce with acids, and is neutral to test-paper. There is also some iron; and the ash melts before the blow-pipe to a dark glass, indicating that this fuel is liable to clinker, and might be destructive to grate-bars.

The lignite, which proved, as I am informed, to be of Miocene Tertiary age, comes close in the results of its "crucible analysis" to the Cretaceous lignites of Mount Diablo, in California. Professor Whitney gives (*Geology of California*, 1865, p. 30) for the mean of five varieties :

	Mount Diablo.	Disco Island.
Water.....	15.53	14.00
Volatile matter.....	37.50	35.38
Fixed carbon.....	42.66	41.79
Ash.....	4.50	8.83
	<hr/> 100.00	<hr/> 100.00

If the ash, which is a very variable constituent, be eliminated in each case, the centesimal composition approaches still closer :

	Mount Diablo. J. D. Whitney.	Disco Island. H. Wurtz.
Water.....	16.23	15.36
Volatile matter.....	39.18	38.81
Fixed carbon.....	44.58	45.83
	<hr/> 100.00	<hr/> 100.00

*Density.*—One of the most remarkable results obtained by me in the examination of this mineral is its very high density. Two determinations made upon small fragments, by the stoppered-bottle method, gave 1.452 and 1.468, with a mean of 1.46. The highest density figures for lignite that I have encountered are 1.354 for one from Colorado, containing 13.67 water and 4 per cent. ash, (J. T. Hodges,) and 1.364 for an Austrian variety, containing 12.54 ash, (Dana's *Mineralogy*, ed. 1868, p. 758.) The great shrinkage while coking led me to determine, with great interest and care, the density of the coke. It was found, when moistened with water, to *effervesce* strongly, evolving a considerable volume of (oxygen?) gas. I was obliged to boil it with water for half an hour, before it ceased to emit bubbles. Its true density was then found to be as high as 1.836! This is higher than any anthracite that I have found on record so far, those of Pennsylvania, except where very ashy, not ranging higher than 1.6, and the heaviest, the Rhode Island, being but 1.8. It is to be remembered, however, that the coke of the Greenland lignite must contain some 17 per cent. of ash. On the supposition that this ash has a density of 2.5, the calculated density of the 83 per cent. of the carbonaceous matter of the coke is still as high as 1.7. I am unable to say what is the density of the cokes made from Colorado lignites, nor, indeed, whether the *true* densities have been determined of *any* cokes whatever.

HENRY WURTZ,  
Hoboken, N. J.

NEW YORK, 236 WEST FOURTH STREET,  
April 28, 1874.

DEAR SIR: In accordance with my promise, made when I transmitted to you an analysis of the Greenland coal brought by the *Juniata*, I now send another from a different source. The former was by Prof. Henry Wurtz. This is from the laboratory of the School of Mines of Columbia College, New York, an institution which, I need hardly say, is of the highest scientific standing.

Prof. Henry Newton has been kind enough to take charge of the work, though it has been executed partly by his assistant, Mr. P. Rickets, and partly by his colleague in charge of the chemical laboratory, Mr. H. Carrington Bolton. The names of these gentlemen afford a guarantee of accuracy, and I am happy to have been able to engage their thoroughly competent co-operation in the work.

The results are in such close conformity with those of the preceding analysis of Professor Wurtz as to give still further assurance that they may be depended upon.



I feel gratified to have succeeded in my endeavors to obtain a careful examination and a definite result, and shall be pleased if the information thus gained shall prove of any value to the Department by which the specimens were so kindly furnished me.  
I remain, very respectfully, yours,

BENJ. N. MARTIN.

WM. W. W. WOOD,  
Engineer-in-Chief, United States Navy.

SCHOOL OF MINES, COLUMBIA COLLEGE,  
Corner Forty-ninth Street and Fourth Avenue,  
New York, ———, 187—.

Analysis of coal marked "Greenland."

Moisture.....	14.00
Volatile and combustible matter.....	36.76
Fixed carbon .....	43.17
Sulphur.....	.47
Ash.....	5.60
	<hr/> 100.00

Respectfully reported by

H. CARRINGTON BOLTON.

APRIL 27, 1874.

All these determinations are averaged from two analyses, save the volatile and combustible matter, which is averaged from three.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1876,  
by the Bureau of Steam-Engineering.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
<b>D.</b>		
<b>SALARIES.</b>		
Chief clerk, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3).....	\$1,800 00	
Draughtsman, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and March 2, 1867, (14 Stat. at L., p. 450, sec. 1) .....	1,800 00	
One clerk of class two, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1) ..	1,400 00	
One assistant draughtsman, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3)	1,200 00	
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	840 00	
One laborer, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and July 12, 1870, (16 Stat. at L., p. 250, sec. 3) .....	720 00	
	<hr/> 7,760 00	<hr/> \$7,760 00
<b>CONTINGENT EXPENSES.</b>		
Stationery and miscellaneous items, (appropriated) .....	1,000 00	1,000 00
<b>PUBLIC PRINTING AND BINDING.</b>		
For printing and binding, to be executed under the direction of the Congressional Printer, per act March 8, 1872, (17 Stat at L., p. 82, sec. 2).....	3,000 00	3,000 00
<b>E.</b>		
<b>STEAM-MACHINERY.</b>		
Repairs and preservation of machinery, boilers, &c., on all naval vessels, (appropriated) .....	1,350,000 00	
Fitting, repairs, and preservation of machinery and tools in the several navy-yards, (appropriated).....	50,000 00	
Labor in navy-yards and stations not included above, and incidental expenses, (appropriated) .....	100 000 00	
Purchase and preservation of oils, coals, metals, and all material and stores, (appropriated) .....	500 000 00	
	<hr/> \$2,000,000	<hr/> 1,800 000

In view of the fact that a large number of the vessels of the Navy are now needing new boilers, this estimate is as low as is consistent with the interests of the service.

No. 11.

## BUREAU OF CONSTRUCTION AND REPAIR.

NAVY DEPARTMENT,  
BUREAU OF CONSTRUCTION AND REPAIR,  
*December 3, 1874.*

SIR: In compliance with your instructions, I have the honor to transmit herewith estimates of expenditures for which appropriations will be required for the fiscal year ending June 30, 1876, coming under the cognizance of the Bureau of Construction and Repair.

Estimates in tables A and B are for the pay of employés attached to this Bureau, and at the several navy-yards, as authorized by acts of Congress.

Estimates in table C are for the preservation of vessels on the stocks and in ordinary; purchase of materials and stores of all kinds; labor at navy-yards and on foreign stations; preservation of materials; purchase of tools; wear, tear, and repair of vessels afloat, and general maintenance of the Navy; incidental expenses and postage.

Estimate in table D is for the preservation of live-oak timber upon the Government lands, for naval purposes.

The work upon the repairs of the iron-clads and vessels requiring large expenditures has progressed with as much dispatch as the appropriation would allow, and is well advanced upon those not yet completed.

Of the Quinnebaug and class, the Swatara has been completed and is on a cruise, the Marion and Vandalia are receiving their machinery, and the Galena, Quinnebaug, Mohican, and Nipsic are nearly ready for launching.

Of the eight sloops authorized by act of Congress, six have been launched and are receiving their machinery; the seventh will be launched very soon; the eighth is well advanced and will be launched as soon as her machinery is ready to be put on board.

No work has yet been done to the Puritan owing to the want of funds, but a design is being prepared to make that vessel a powerful iron-clad with a high rate of speed, to be armed with four 10-inch rifled guns, and to be heavily plated.

The only vessels adapted to the service, required by act of Congress to be turned over to the cities of New York, Boston, Baltimore, and San Francisco, for nautical schools of instruction, are sailing-vessels of war, which have required extensive repairs. The cost will be quite \$50,000 to each vessel, and as that expenditure was not provided for in the estimates, an appropriation should be made to re-imburse the annual expenditures of repairs for the Navy, to the amount thus used.

I have the honor to be, very respectfully, your obedient servant,  
I. HANSCOM,  
*Chief of Bureau.*

Hon. GEORGE M. ROBESON,  
*Secretary of the Navy.*

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1876, by the Bureau of Construction and Repair.*

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
<b>A.</b>		
<b>SALARIES.</b>		
Chief clerk, per act of July 5, 1862, (12 Stat. at L., p. 511, sec. 3).....	\$1,800 00	
Draughtsman, per act of March 2, 1867, (14 Stat. at L., p. 450, sec. 1).....	1,800 00	
One clerk of class four, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8)....	1,800 00	
Two clerks of class three, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8) ..	3,200 00	
Two clerks of class two, per act of July 23, 1866, (14 Stat. at L., p. 207, sec. 8) ..	2,800 00	
One messenger, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and March 3, 1869, (15 Stat. at L., p. 287, sec. 1) .....	840 00	
One laborer, per acts of July 5, 1862, (12 Stat. at L., p. 511, sec. 3,) and March 3, 1869, (15 Stat. at L., p. 287, sec. 1) .....	720 00	
	12,960 00	
<b>CONTINGENT.</b>		
Stationery and miscellaneous items, (appropriated).....	800 00	
<b>B.</b>		
<b>CIVIL ESTABLISHMENT.</b>		
<b>At the navy-yard, Kittery:</b>		
Clerk of store-houses.....	1,400 00	
Clerk to naval constructor.....	1,400 00	
Time clerk .....	1,400 00	
Draughtsman to naval constructor.....	1,600 00	
Inspector of timber.....	1,400 00	
Superintendent of floating-dock.....	1,400 00	
	8,600 00	
<b>At the navy-yard, Charlestown:</b>		
Clerk of store-houses.....	1,500 00	
Clerk to naval constructor... ..	1,500 00	
Time-clerk .....	1,500 00	
Draughtsman to naval constructor.....	1,600 00	
Inspector of timber.....	1,500 00	
	7,600 00	
<b>At the navy-yard, Brooklyn:</b>		
Clerk of store-houses .....	1,500 00	
Clerk to naval constructor.....	1,500 00	
Time-clerk .....	1,500 00	
Draughtsman to naval constructor.....	1,600 00	
Inspector of timber .....	1,500 00	
	7,600 00	
<b>At the navy-yard, Philadelphia:</b>		
Clerk of store-houses .....	1,400 00	
Clerk to naval constructor.....	1,400 00	
Time-clerk.....	1,400 00	
Draughtsman to naval constructor.....	1,600 00	
Inspector of timber.....	1,400 00	
Superintendent of floating-dock.....	1,400 00	
	8,600 00	
<b>At the navy-yard, Washington:</b>		
Clerk of store-houses.....	1,400 00	
Clerk to naval constructor.....	1,400 00	
Time-clerk.....	1,200 00	
Draughtsman to naval constructor.....	1,600 00	
Inspector of timber.....	1,200 00	
	6,800 00	

*Estimates of appropriations required for the service, &c.—Continued.*

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1873.
<b>At the navy-yard, Norfolk:</b>		
Clerk of store-houses .....	\$1,400 00	
Clerk to naval constructor .....	1,400 00	
Time-clerk .....	1,400 00	
Draughtsman to naval constructor .....	1,600 00	
Inspector of timber .....	1,400 00	
	<b>7,600 00</b>	
<b>At the navy-yard, Pensacola:</b>		
Clerk of store-houses .....	1,400 00	
<b>At the navy-yard, Mare Island:</b>		
Clerk of store-houses .....	1,500 00	
Clerk to naval constructor .....	1,500 00	
Time-clerk .....	1,500 00	
Draughtsman to naval constructor .....	1,600 00	
Inspector of timber .....	1,500 00	
Superintendent of floating-dock .....	1,500 00	
	<b>9,100 00</b>	
<b>C.</b>		
<b>CONSTRUCTION AND REPAIR OF VESSELS.</b>		
Preservation of vessels on the stocks and in ordinary; purchase of materials and stores of all kinds; labor in navy-yards and on foreign stations; preservation of material; purchase of tools; wear, tear, and repair of vessels afloat, and general maintenance of the Navy; incidental expenses, advertising, and foreign postages .....	3,500,000 00	\$3,500,000 00
<b>D.</b>		
<b>PROTECTION OF TIMBER-LANDS.</b>		
Salaries of subagents and watchmen, and miscellaneous expenses .....	5,000 00	5,000 00

*Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair of April 6, 1874, at the navy-yard, Portsmouth, N. H.***Class No. 13. White-pine plank boards:**

A. P. Brown .....	\$6,405 00
Southard & Co. ....	5,865 00
Trickey & Jewett .....	*5,800 00
Watson & Pittinger .....	6,125 00
Joseph W. Duryee .....	6,005 00
George A. Hammond .....	6,040 00
Shepherd & Chester .....	†

**Class No. 15. White ash, elm, beech:**

A. P. Brown .....	1,547 00
Southard & Co. ....	1,045 00
Trickey & Jewett .....	*900 00
Watson & Pittinger .....	1,240 00
Joseph W. Duryee .....	918 00
George A. Hammond .....	1,088 00
Shepherd & Chester .....	†

\* Accepted.

**Class No. 18. Black walnut, mahogany, &c.:**

A. P. Brown .....	1,695 00
Southard & Co. ....	2,100 00
Trickey & Jewett .....	*1,420 00
Watson & Pittinger .....	2,190 00
Joseph W. Duryee .....	1,494 00
George A. Hammonnd .....	2,190 00
Shepherd & Chester .....	†

**Class No. 33. Wrought iron, flat:**

A. P. Brown .....	310 50
Wilson & Magraw .....	189 75
Hyatt & Spencer .....	*158 00
George H. Creed .....	184 00
James L. Parker .....	166 75
Catasauqua Manufacturing Co. ....	161 00

† Informal.

## Class No. 37. Iron spikes :

A. P. Brown .....	\$240 00
Wilson & Magraw .....	187 50
Hyatt & Spencer .....	*153 75
George H. Creed .....	172 50
James L. Parker .....	172 50
J. H. Wainwright .....	195 00

## Class No. 39. Iron cut nails :

Wilson & Magraw .....	*247 74
Hyatt & Spencer .....	269 44
George H. Creed .....	252 90
James L. Parker .....	250 00
J. H. Wainwright .....	284 53

## Class No. 42. Lead, pipe, sheet :

David Babcock & Co....	462 50
A. P. Brown .....	600 00
Hyatt & Spencer .....	425 00
George H. Creed .....	485 00
James L. Parker .....	*420 00

## Class No. 43. Zinc :

David Babcock & Co....	855 00
A. P. Brown .....	1,132 50
Wilson & Magraw .....	1,017 50
Hyatt & Spencer .....	820 00
George H. Creed .....	*810 00

## Class No. 44. Tin :

David Babcock & Co....	801 50
A. P. Brown .....	1,347 00
Hyatt & Spencer .....	736 25
George H. Creed .....	*734 00
James L. Parker .....	780 00

## Class No. 48. Locks, hinges, &amp;c. :

Wilson & Magraw .....	194 00
Hyatt & Spencer .....	116 00
George H. Creed .....	*115 00

## Class No. 49. Screws of brass and iron :

A. P. Brown .....	424 65
Wilson & Magraw .....	305 17
Hyatt & Spencer .....	*247 90
George H. Creed .....	308 20
James L. Parker .....	271 00
Walton Bros .....	278 95
Morton, Reed & Co .....	330 80

## Class No. 50. Files :

Wilson & Magraw .....	697 15
Hyatt & Spencer .....	572 28
George H. Creed .....	*511 02
James L. Parker .....	654 00
Henry A. Priest & Co ...	555 18
Walton Bros .....	†485 25
Morton, Reed & Co .....	728 76

\* Accepted.

## Class No. 51. Augers :

David Babcock & Co....	\$357 80
Wilson & Magraw .....	505 50
Hyatt & Spencer .....	*351 95
George H. Creed .....	*315 00
James L. Parker .....	335 00
Walton Bros .....	415 50

## Class No. 52. Tools for stores :

Wilson & Magraw .....	*193 94
Hyatt & Spencer .....	200 40
George H. Creed .....	266 20

## Class No. 53. Tools for yard use :

Hyatt & Spencer .....	*133 40
George H. Creed .....	142 80
Henry A. Priest & Co....	135 64

## Class No. 54. Hardware :

David Babcock & Co....	598 50
Wilson & Magraw .....	764 25
Hyatt & Spencer .....	560 70
George H. Creed .....	*553 00

## Class No. 56. White lead :

David Babcock & Co....	1,100 00
A. P. Brown .....	1,225 00
Hyatt & Spencer .....	987 50
George H. Creed .....	*950 00
James L. Parker .....	987 00
Walton Bros .....	1,000 00
Harrison Bros. & Co....	1,009 00

## Class No. 58. Colored paints, driers :

A. P. Brown .....	173 50
Wilson & Magraw .....	157 50
Hyatt & Spencer .....	120 50
George H. Creed .....	123 25
James L. Parker .....	119 00
Walton Bros .....	116 50
Harrison Bros. & Co....	*112 50

## Class No. 59. Linseed-oil :

David Babcock & Co....	980 00
A. P. Brown .....	1,000 00
Hyatt & Spencer .....	999 00
George H. Creed .....	*930 00
James L. Parker .....	972 50

## Class No. 60. Varnish, spirits turpentine .

David Babcock & Co....	613 20
Hyatt & Spencer .....	*412 05
George H. Creed .....	432 20
James L. Parker .....	539 49
Walton Bros .....	532 90

† Bid withdrawn.

Class No. 63. Sperm and lard oil :

David Babcock & Co.....	\$1,264 00
A. P. Brown.....	1,520 00
Hyatt & Spencer.....	1,289 40
George H. Creed.....	* 1,095 00
Henry A. Priest & Co...	1,215 00

Class No. 64. Tallow, soap :

David Babcock & Co.....	195 00
Wilson & Magraw.....	* † 180 00
Hyatt & Spencer.....	210 00
George H. Creed.....	210 00
John Stokell & Co.....	† 180 00

Class No. 65. Fish-oil:

David Babcock & Co.....	268 00
Hyatt & Spencer.....	* 220 00
George H. Creed.....	280 00
John Stokell & Co.....	340 00

Class No. 71. Stationery :

Frost & Adams.....	215 75
William H. Dempsey....	212 20
William Ballantyne.....	237 74
Warren Choate & Co...	* 184 50

Class No. 73. Ship-chandlery :

Hyatt & Spencer.....	* 310 20
George H. Creed.....	403 25
James L. Parker.....	359 50
David Babcock & Co...	413 00

Opened in presence of—  
I. HANSCOM, *Chief of Bureau.*  
H. A GOLDSBOROUGH, *Chief Clerk.*  
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May 7, 1874.*

Class No. 85. Anthracite coal:

David Babcock & Co....	\$4,267 50
A. P. Brown.....	5,274 00
Samuel G. French.....	4,270 00
Hyatt & Spencer.....	4,205 00
Joseph Sise & Co.....	4,626 00
Meeker & Dean.....	4,150 00
Charles E. Walker & Co	* 4,090 00
Walton Bros.....	† 3,990 00
R. T. Heiston.....	4,344 50
James Symington.....	4,776 50
Audenried, Norton & Co.	4,777 50

Class No. 87. Bituminous coal :

David Babcock & Co ...	4,374 00
A. P. Brown.....	4,734 00
S. C. Thwing & Co.....	† 4,344 00
Samuel G. French.....	4,470 00
Hyatt and Spencer.....	4,620 00
Joseph Sise & Co.....	4,776 00
Meeker & Dean.....	4,494 00
Charles E. Walker & Co.	4,440 00
Walton Bros.....	† 3,990 00
H. C. Winship.....	* † 4,344 00
Alexander Ray.....	4,350 00
James Symington.....	4,644 00
Robert Mowe.....	4,746 00

Class No. 88. Charcoal :

David Babcock & Co....	1,238 75
Hyatt & Spencer.....	* 858 75
Walton Bros.....	855 00
John Stokell & Co.....	1,437 50

*Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair of April 6, 1874, at the navy-yard, Boston, Mass.*

Class No. 16. White-ash oars :

David Babcock & Co....	† \$660 00
George H. Creed.....	* † 660 00
Southard & Co.....	1,150 00
George A. Hammond....	718 00
A. P. Brown.....	1,600 00

Class No. 25. Lignum-vitæ :

A. P. Brown.....	1,020 00
David Babcock & Co ...	944 00
George H. Creed.....	900 00
Southard & Co.....	1,140 00
Trickey & Jewett.....	* 800 00
George A. Hammond....	1,104 00
Watson & Pittinger....	2,920 00

Class No. 32. Wrought iron, round and square :

A. P. Brown.....	\$1,105 00
George H. Creed.....	715 00
Hyatt & Spencer.....	659 00
Walton Bros.....	627 75
Thomas Poultney.....	* 609 00
Catasauqua Manufactur- ing Company.....	666 00

Class No. 33. Wrought iron, flat :

A. P. Brown.....	858 00
George H. Creed.....	584 00
Hyatt & Spencer.....	665 60

\* Accepted.

† Bid withdrawn.

‡ Decided by lot.



Walton Bros.....	\$597 45	George H. Creed.....	*\$635 80
Thomas Poultney.....	†392 80	Hyatt & Spencer.....	867 28
Catasauqua Manufacturing Company.....	657 00	Class No. 56. White lead :	
Class No. 34. Iron plate :		A. P. Brown.....	1,200 00
George H. Creed.....	*296 33	David Babcock & Co....	1,075 00
Hyatt & Spencer.....	345 14	George D. Putnam.....	*‡940 00
Walworth Manufacturing Company.....	540 44	George H. Creed.....	‡940 00
Thomas Poultney.....	355 44	Hyatt & Spencer.....	987 50
Morris Tasker & Co.....	444 32	J. H. Chadwick & Co...	950 00
Class No. 35. Steel :		Walton Bros.....	1,000 00
A. P. Brown.....	1,149 75	Harrison Bros. & Co....	1,000 00
David Babcock & Co....	1,679 00	Thomas Poultney.....	1,040 00
George D. Putnam.....	1,131 50	Class No. 59. Linseed-oil :	
George H. Creed.....	1,092 50	A. P. Brown.....	1,100 00
George Dunbar & Co...	1,095 00	David Babcock & Co....	970 00
Hyatt & Spencer.....	*1,051 20	George D. Putnam.....	*900 00
Leeds, Robinson & Co..	1,131 50	George H. Creed.....	930 00
Walton Bros.....	1,095 00	Hyatt & Spencer.....	980 00
Thomas Poultney.....	1,095 00	Thomas Poultney.....	990 00
Morris Tasker & Co.....	1,085 87	Class No. 60. Varnish, spirits of turpentine :	
William Baldwin.....	1,095 00	David Babcock & Co....	1,276 20
Morton, Reed & Co.....	1,146 10	A. P. Brown.....	1,438 00
Class No. 37. Iron spikes :		George D. Putnam.....	*1,149 50
A. P. Brown.....	1,312 50	George H. Creed.....	1,178 00
J. W. Buker.....	950 00	Hyatt & Spencer.....	1,224 50
George H. Creed.....	862 50	Walton Bros.....	1,234 50
Hyatt & Spencer.....	*750 00	Thomas Poultney.....	1,263 50
Thomas Poultney.....	887 50	Class No. 63. Sperm and lard oil :	
J. H. Wainwright.....	956 25	A. P. Brown.....	2,217 50
Class No. 42. Lead, pipe, sheet :		David Babcock & Co....	1,968 70
A. P. Brown.....	132 00	George D. Putnam.....	1,640 50
David Babcock & Co....	101 75	George H. Creed.....	*1,551 00
George H. Creed.....	97 90	Hyatt & Spencer.....	2,020 50
Hyatt & Spencer.....	93 50	Henry A. Priest & Co...	1,896 65
J. H. Chadwick & Co...	*92 13	Buss & Bradley.....	†1,495 00
Thomas Poultney.....	96 80	Thomas Poultney.....	2,067 50
Class No. 43. Zinc :		Class No. 69. Brushes :	
A. P. Brown.....	975 00	David Babcock & Co....	350 00
David Babcock & Co....	780 00	George D. Putnam.....	350 00
George D. Putnam.....	725 00	George H. Creed.....	*292 00
George H. Creed.....	*700 00	Hyatt & Spencer.....	355 00
Hyatt & Spencer.....	740 00	Class No. 71. Stationery :	
Thomas Poultney.....	790 00	William H. Dempsey....	697 74
Class No. 53. Tools, for yard use :		Frost & Adams.....	618 25
David Babcock & Co....	1,378 90	William Ballantyne....	638 06
George D. Putnam.....	1,106 65	Warren Choate & Co...	*553 57
George H. Creed.....	977 15	Class No. 72. Crucibles :	
Hyatt & Spencer.....	*896 82	David Babcock & Co...	142 80
Henry A. Priest & Co...	1,137 07	George H. Creed.....	117 00
Buss & Bradley.....	1,323 95	Hyatt & Spencer.....	*82 30
Class No. 54. Hardware :		Walton Bros.....	103 20
David Babcock & Co...	994 93	Ross & Hoferkamp.....	123 84
George D. Putnam.....	754 42	D. A. Trefethan.....	118 68

\* Accepted.

† Informal.

‡ Decided by lot.

## Class No. 73. Ship-chandlery:

David Babcock & Co....	\$532 00
George D. Putnam .....	*444 00
George H. Creed .....	456 50
Hyatt & Spencer .....	530 75

## Class No. 74. Acids:

J. W. Buker .....	*266 75
George H. Creed .....	376 75
Hyatt & Spencer.....	358 29

Class No. 75. Rosin, pitch,  
crude turpentine:

A. P. Brown .....	400 00
David Babcock & Co....	280 00
J. W. Buker .....	300 00
George H. Creed .....	*225 00
Hyatt & Spencer .....	244 00

Class No. 77. §Belting,  
packing:

David Babcock & Co...	492 00
George D. Putnam .....	398 50
George H. Creed .....	443 00
Hyatt & Spencer.....	410 00
Henry A. Priest & Co...	415 50
Walworth Manufacturing Company .....	394 50
William A. Torrey & Co.	760 00

Opened in presence of—

I. HANSCOM, *Chief of Bureau.*H. A. GOLDSBOROUGH, *Chief Clerk.*B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, May 7, 1874.

## Class No. 85. Anthracite coal:

A. P. Brown .....	\$11,947 50
David Babcock & Co....	9,342 00
George H. Creed .....	10,125 00
Hyatt & Spencer .....	9,382 50
Meeker & Dean .....	†9,112 50
Samuel G. French.....	*9,247 50
Walton Bros.....	†8,977 50
R. T. Heiston .....	9,697 50
James Symington.....	10,092 00
Audenried, Norton & Co.	10,462 50

## Class No. 87. Bituminous coal:

A. P. Brown .....	4,950 00
David Babcock & Co....	4,374 00
George H. Creed .....	5,400 00
Hyatt & Spencer.....	4,590 00
S. C. Thwing & Co.....	4,284 00
Meeker & Dean.....	4,392 00
Samuel G. French.....	4,320 00
Walton Bros.....	†3,990 00
H. C. Winship .....	4,194 00
Alexander Ray .....	*4,182 00
James Symington.....	4,644 00
Robert Mowe .....	4,596 00

## Class No. 88. Charcoal:

David Babcock & Co....	1,875 00
George D. Putnam.....	1,475 00
George H. Creed.....	1,525 00
Hyatt & Spencer .....	*1,390 00
Walton Bros.....	4,207 50

*Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair, of April 6, 1874, at the navy-yard, New York.*

## Class No. 1. White-oak logs:

A. P. Brown .....	\$3,150 00
J. M. Richardson.....	3,500 00
Mann & Co.....	2,700 00
Southard & Co .....	*2,695 00
Trickey & Jewett.....	3,000 00
George A. Hammond....	3,200 00
Richard Fentress .....	3,000 00
A. H. Lindsay.....	2,975 00
R. J. Neely .....	2,900 00

## Class No. 16. White-ash oars:

David Babcock & Co....	790 00
A. P. Brown .....	2,000 00
Southard & Co .....	1,275 00
L. D. Jennard.....	875 00
George A. Hammond....	850 00
DeGraw, Aymar & Co...	*725 00

Class No. 18. Black walnut,  
mahogany, &c..

A. P. Brown.....	\$560 00
Southard & Co.....	580 00
Trickey & Jewett.....	*340 00
George A. Hammond....	345 00
Watson & Pittinger....	500 00
Richard Fentress.....	450 00
Joseph W. Duryee.....	340 00

Class No. 24. White-oak  
staves, &c.:

David Babcock & Co....	*765 00
J. W. Buker .....	900 00
Watson & Pittinger....	574 00

Class No. 32. Wrought iron,  
round and square:

A. P. Brown.....	4,160 00
Hyatt & Spencer.....	2,086 00

\* Accepted.

† Informal.

‡ Bid withdrawn.

§ Class not awarded.

George H. Creed.....	\$2,000 00
S. A. Wheelwright.....	2,240 00
Walton Brothers.....	2,362 50
William Gardner.....	2,425 00
Thomas Poultney.....	*1,866 00
Catasauqua Manufacturing Company.....	2,256 00

## Class No. 42. Lead, pipe, sheet:

David Babcock & Co....	2,275 00
A. P. Brown.....	2,860 00
Hyatt & Spencer.....	2,132 00
George H. Creed.....	2,190 00
S. A. Wheelwright.....	2,236 00
Thomas Poultney.....	*2,020 00

## Class No. 43. Zinc.

David Babcock & Co....	1,500 00
A. P. Brown.....	1,850 00
Hyatt & Spencer.....	1,480 00
George H. Creed.....	*1,380 00
S. A. Wheelwright.....	1,550 00
Thomas Poultney.....	1,500 00

## Class No. 44. Tin:

David Babcock & Co....	296 25
A. P. Brown.....	337 25
Hyatt & Spencer.....	352 50
George H. Creed.....	309 00
S. A. Wheelwright.....	*241 00
Thomas Poultney.....	337 25

## Class No. 56. White lead:

David Babcock & Co....	1,050 00
A. P. Brown.....	1,100 00
Hyatt & Spencer.....	1,000 00
George H. Creed.....	*900 00
S. A. Wheelwright.....	990 00
Walton Brothers.....	1,000 00
Harrison Bros. & Co....	1,000 00
George N. Gardner.....	975 00
Thomas Poultney.....	1,150 00

## Class No 57. Zinc paint:

David Babcock & Co....	680 00
A. P. Brown.....	1,040 00
Hyatt & Spencer.....	640 00
George H. Creed.....	*560 00
S. A. Wheelwright.....	712 00
Walton Brothers.....	640 00
Harrison Bros. & Co....	600 00
Thomas Poultney.....	680 00

## Class No. 58. Colored paints, &amp;c.

David Babcock & Co....	1,352 60
A. P. Brown.....	2,413 00
Hyatt & Spencer.....	1,162 85
George H. Creed.....	*987 00
S. A. Wheelwright.....	1,244 43
Walton Bros.....	1,215 50
Harrison Bros. & Co....	1,055 30
Thomas Poultney.....	1,188 20

## Class No. 59. Linseed-oil:

David Babcock & Co...	\$3,360 00
A. P. Brown.....	3,465 00
Hyatt & Spencer.....	3,430 00
George H. Creed.....	*3,115 00
J. W. Buker.....	3,675 00
S. A. Wheelwright.....	3,360 00
George N. Gardner.....	3,491 25
Thomas Poultney.....	3,465 00

## Class No. 60. Varnish, spirits turpentine:

David Babcock & Co...	1,115 00
A. P. Brown.....	1,598 00
Hyatt & Spencer.....	1,100 40
George H. Creed.....	*992 00
S. A. Wheelwright.....	1,121 00
Walton Bros.....	1,072 00
Thomas Poultney.....	1,114 00

## Class No. 64. Tallow, soap:

David Babcock & Co...	127 00
Hyatt & Spencer.....	122 00
George H. Creed.....	*101 00
L. D. Jenard.....	126 00
S. A. Wheelwright.....	113 50

## Class No. 65. Fish-oil:

David Babcock & Co...	130 00
Hyatt & Spencer.....	104 00
George H. Creed.....	98 00
J. W. Buker.....	120 00
L. D. Jenard.....	120 00
S. A. Wheelwright.....	*90 00
Thomas Poultney.....	96 00

## Class No. 69. Brushes:

A. P. Brown.....	1,125 00
Hyatt & Spencer.....	716 15
George H. Creed.....	*600 00
S. A. Wheelwright.....	766 00

## Class No. 70. Dry goods:

A. P. Brown.....	1,588 44
Hyatt & Spencer.....	*701 05
George H. Creed.....	701 90
J. W. Buker.....	729 45

## Class No. 71. Stationery:

William H. Dempsey....	366 95 *
William Ballantyne....	369 03
Warren Choate & Co...	*344 90
T. Newton Kurtz.....	356 62

## Class No. 73. Ship-chandlery:

David Babcock & Co...	1,258 60
A. P. Brown.....	2,492 50
Hyatt & Spencer.....	1,061 00
George H. Creed.....	*907 20
L. D. Jenard.....	1,096 00

\* Accepted.

## Class No. 85. Anthracite coal:

David Babcock & Co...	\$7,163 00
Samuel G. French.....	6,874 00
A. P. Brown.....	8,775 00
Hyatt & Spencer.....	7,320 00
George H. Creed.....	*6,450 00
Walton Bros.....	†6,440 00
R. T. Heiston.....	7,792 50
James Symington.....	7,747 00
Audenried, Norton & Co.	9,050 00

## Class No. 86. Semi-bituminous coal:

David Babcock & Co....	3,948 00
------------------------	----------

Opened in presence of—

I. HANSCOM, *Chief of Bureau.*H. A. GOLDSBOROUGH, *Chief Clerk.*B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, May 7, 1874.

Samuel G. French.....	\$3,810 00
A. P. Brown.....	4,734 00
Hyatt & Spencer.....	3,900 00
George H. Creed.....	3,900 00
Walton Bros.....	3,990 00
Berwind & Bradley.....	*3,654 00
James Symington.....	3,864 00
Josiah M. Bacon.....	3,990 00

## Class No. 88. Charcoal:

David Babcock & Co...	1,240 00
Samuel G. French.....	*1,090 00
Hyatt & Spencer.....	1,230 00
George H. Creed.....	1,200 00

*Offers to furnish material for the Navy under the advertisement of the Bureau of Construction and Repair of April 6, 1874, at the navy-yard, Philadelphia, Pa.*

## Class No. 13. White-pine plank, boards:

A. P. Brown.....	\$5,011 50
Southard & Co.....	4,575 00
L. Thompson & Co.....	4,522 50
J. W. Gaskill & Sons....	*3,760 50
Watson & Pittinger....	4,471 50
Trickey & Jewett.....	5,027 50
Joseph W. Duryee.....	4,098 00

## Class No. 15. White-ash, elm, beech:

A. P. Brown.....	1,348 50
Southard & Co.....	891 25
L. Thompson & Co.....	*744 00
J. W. Gaskill & Sons....	826 50
Watson & Pittinger....	1,007 50
Trickey & Jewett.....	855 00
Joseph W. Duryee.....	790 50

## Class No. 16. White-ash oars:

A. P. Brown.....	400 00
J. W. Gaskill & Sons....	220 00
David Babcock & Co....	*170 00
J. W. Buker.....	180 00

## Class No. 18. Black-walnut, mahogany, &amp;c.:

A. P. Brown.....	735 00
Southard & Co.....	685 00
L. Thompson & Co.....	*500 00
J. W. Gaskill & Sons....	543 50
Watson & Pittinger....	705 00
Trickey & Jewett.....	530 00
Joseph W. Duryee.....	500 00

\* Accepted.

† Bid withdrawn.

‡ Decided by lot.

## Class No. 35. Steel:

A. P. Brown.....	\$626 06
David Babcock & Co....	914 25
Hyatt & Spencer.....	*572 40
J. W. Buker.....	638 00
George H. Creed.....	601 75
S. A. Wheelwright.....	626 06
Walton Bros.....	†566 55
Thomas Poultney.....	596 25
William Baldwin.....	596 25
Morton, Reed & Co.....	624 07

## Class No. 38. Iron wrought nails:

Paul J. Field.....	97 50
Hyatt & Spencer.....	39 00
J. W. Buker.....	60 00
George H. Creed.....	120 00
Thomas Poultney.....	*18 37
J. H. Wainwright.....	20 40

## Class No. 39. Iron cut nails:

Paul J. Field.....	263 50
Hyatt & Spencer.....	243 00
J. W. Buker.....	288 00
George H. Creed.....	237 75
S. A. Wheelwright.....	245 70
Thomas Poultney.....	*215 40
J. H. Wainwright.....	290 00

## Class No. 43. Zinc:

A. P. Brown.....	1,387 50
David Babcock & Co....	1,200 00
Hyatt & Spencer.....	*1,122 00
J. W. Buker.....	1,312 50

George H. Creed.....	\$1,140 00
S. A. Wheelwright.....	1,215 00
Thomas Poultney.....	1,185 00

## Class No. 48. Locks, hinges, &amp;c.:

Paul J. Field.....	304 75
Hyatt & Spencer.....	171 50
J. W. Buker.....	*150 00
George H. Creed.....	201 00

## Class No. 49. Screws:

A. P. Brown.....	1,603 87
Paul J. Field.....	1,035 79
Hyatt & Spencer.....	*\$946 66
J. W. Buker.....	1,212 63
George H. Creed.....	961 52
S. A. Wheelwright.....	1,234 61
Walton Bros.....	1,164 41
Morton, Reed & Co.....	1,369 37

## Class No. 50. Files:

A. P. Brown.....	922 97
Paul J. Field.....	875 77
Hyatt & Spencer.....	790 07
J. W. Buker.....	*743 70
George H. Creed.....	753 62
S. A. Wheelwright.....	798 22
Walton Bros.....	794 68
Morton, Reed & Co.....	1,078 21

## Class No. 51. Augers:

Paul J. Field.....	498 95
Hyatt & Spencer.....	446 29
J. W. Buker.....	484 00
George H. Creed.....	*419 21
Walton Bros.....	522 00
Thomas Poultney.....	446 10

## Class No. 53. Tools for yard use:

Paul J. Field.....	2,421 26
Hyatt & Spencer.....	1,577 41
J. W. Buker.....	*1,446 90

## Class No. 54. Hardware:

Paul J. Field.....	1,551 20
Hyatt & Spencer.....	1,345 11
J. W. Buker.....	1,572 00
George H. Creed.....	*1,298 00

## Class No. 56. White lead:

A. P. Brown.....	1,100 00
David Babcock & Co...	1,100 00
George H. Creed.....	*925 00
S. A. Wheelwright.....	1,000 00
Walton Bros.....	1,000 00
Harrison Bros. & Co....	950 00
Thomas Poultney.....	1,150 00
H. H. Corbin.....	1,200 00
Hyatt & Spencer.....	987 50
J. W. Buker.....	1,100 00

## Class No. 58. Colored paints, dryers:

David Babcock & Co....	\$544 50
Hyatt & Spencer.....	393 16
J. W. Buker.....	570 50
George H. Creed.....	365 75
S. A. Wheelwright.....	480 50
Walton Bros.....	420 65
Harrison Bros. & Co....	*363 50
Thomas Poultney.....	489 25
H. H. Corbin.....	421 75

## Class No. 59. Linseed-oil:

A. P. Brown.....	880 00
David Babcock & Co....	784 00
Hyatt & Spencer.....	792 00
J. W. Buker.....	880 00
George H. Creed.....	*720 00
S. A. Wheelwright.....	768 00
Thomas Poultney.....	800 00
H. H. Corbin.....	800 00

## Class No. 60. Varnish, spirits turpentine:

David Babcock & Co....	715 00
Hyatt & Spencer.....	650 05
J. W. Buker.....	870 00
George H. Creed.....	*627 50
S. A. Wheelwright.....	675 75
Walton Bros.....	657 00
Thomas Poultney.....	652 50
H. H. Corbin.....	772 50

## Class No. 63. Sperm and lard oil:

A. P. Brown.....	562 50
David Babcock & Co....	495 00
Hyatt & Spencer.....	485 00
J. W. Buker.....	450 00
George H. Creed.....	*400 00
S. A. Wheelwright.....	525 00
Thomas Poultney.....	500 00

## Class No. 68. Glass.

A. P. Brown.....	547 50
Hyatt & Spencer.....	*332 88
George H. Creed.....	430 50
Walton Bros.....	454 50
H. H. Corbin.....	469 25

## Class No. 69. Brushes:

Hyatt & Spencer.....	543 77
J. W. Buker.....	512 80
George H. Creed.....	*462 33
H. H. Corbin.....	888 00

## Class No. 70. Dry goods for upholstering:

Paul J. Field.....	335 48
Hyatt & Spencer.....	*280 45
J. W. Buker.....	305 00
George H. Creed.....	356 50

\* Accepted.

Class No. 71. Stationery :

William H. Dempsey .....	\$197 50
William Ballautyne .....	216 85
Warren Choate & Co ...	*179 74
T. Newton Kurtz .....	207 47

Class No. 72. Crucibles :

A. P. Brown .....	570 00
Paul J. Field .....	402 80
David Babcock & Co....	625 00
Hyatt & Spencer .....	*357 80
J. W. Buker .....	483 00
George H. Creed .....	460 00
Walton Bros .....	450 00
Ross & Hoferkamp .....	450 00
Straw, Wile & Co .....	405 00

Class No. 73. Ship-chandlery :

Paul J. Field .....	276 00
David Babcock & Co....	297 60
Hyatt & Spencer .....	*260 35
J. W. Buker .....	286 00
George H. Creed .....	265 50

Class No. 74. Acids :

Hyatt & Spencer .....	973 56
Wilson, Hood & Co.....	1,172 25
J. W. Buker .....	*692 90

Class No. 75. Rosin, pitch, &c. :

David Babcock & Co ...	180 00
Hyatt & Spencer .....	*162 00
J. W. Buker .....	237 50
A. P. Brown .....	225 00

Class No. 77. Belting, packing :

Hyatt & Spencer .....	*800 89
-----------------------	---------

Opened in presence of—  
I. HANSCOM, *Chief of Bureau.*  
H. A. GOLDSBOROUGH, *Chief Clerk.*  
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, May 7, 1874.

J. W. Buker .....	\$886 10
S. A. Wheelwright .....	1,106 50
Walton Bros.....	1,398 43
William A. Torrey & Co.	1,392 10

Class No. 85. Anthracite coal :

A. P. Brown .....	3,050 00
Hyatt & Spencer .....	*2,433 25
Walton Bros.....	3,458 00
Plaisted & McCollin ....	2,638 35
William F. Moody .....	2,577 50
R. T. Heiston.....	2,565 10
James Symington .....	2,713 11

Class No. 86. Semi-bituminous coal :

A. P. Brown .....	790 00
Hyatt & Spencer .....	555 00
Walton Bros.....	665 00
Berwind & Bradley.....	*520 00
Plaisted & McCollin ....	613 00
William F. Moody .....	525 00
James Symington.....	573 00

Class No. 87. Bituminous coal :

A. P. Brown .....	2,097 00
Hyatt & Spencer .....	1,725 00
L. W. Guinand .....	1,938 00
Walton Bros.....	1,995 00
Berwind & Bradley.....	*1,650 00
Plaisted & McCollin ....	1,944 00
William F. Moody .....	1,875 00
H. C. Winship .....	1,695 00
James Symington.....	1,845 00

Class No. 88. Charcoal :

Paul J. Field .....	390 00
Hyatt & Spencer.....	*375 00
Walton Bros.....	1350 00

Offers to furnish material for the Navy under the advertisement of the Bureau of Construction and Repair of April 6, 1874, at the navy-yard, Washington, D. C.

Class No. 23. Black-spruce :

J. W. Gaskill & Sons ....	\$770 00
J. W. Buker.....	1,370 00
A. P. Brown .....	612 00
Watson & Pittinger.....	676 00
Trickey & Jewett.....	1,370 00
R. J. Neely .....	*419 00

Accepted.

Class No. 33. Wrought iron, flat :

J. W. Buker.....	\$83 00
A. P. Brown .....	148 50
Hyatt & Spencer .....	79 50
Thomas Poultney .....	*63 50
Catasauqua Manufacturing Co.....	77 00

† Bid withdrawn.



## Class No. 35. Steel :

David Babcock & Co.....	\$1,158 05
J. W. Buker .....	779 00
A. P. Brown .....	780 42
Hyatt & Spencer.....	*723 81
George P. Goff .....	797 16
S. A. Wheelwright .....	795 50
Walton Bros.....	719 33
Thomas Poultney.....	736 88
William Baldwin .....	755 25
Morton, Reed & Co.....	790 50

## Class No. 37. Iron spikes :

J. W. Buker .....	276 00
A. P. Brown .....	368 00
Hyatt & Spencer.....	*241 50
George P. Goff .....	322 00
S. A. Wheelwright .....	336 75
Thomas Poultney .....	275 25
J. H. Wainwright .....	299 00
Morton, Reed & Co.....	299 00

## Class No. 42. Lead, pipe, sheet :

David Babcock & Co....	484 50
J. W. Buker .....	569 00
A. P. Brown .....	561 00
Hyatt & Spencer.....	439 87
George P. Goff .....	497 25
S. A. Wheelwright .....	453 90
Thomas Poultney .....	*438 60

## Class No. 43. Zinc :

David Babcock & Co....	56 25
J. W. Buker .....	60 00
A. P. Brown .....	60 00
Hyatt & Spencer .....	53 45
S. A. Wheelwright .....	50 00
Thomas Poultney.....	*49 50

## Class No. 48. Locks, hinges, &amp;c. :

J. W. Buker .....	767 70
A. P. Brown .....	933 10
Hyatt & Spencer.....	*763 51

## Class No. 49. Screws :

J. W. Buker .....	543 25
A. P. Brown .....	845 00
Hyatt & Spencer.....	*536 90
George P. Goff .....	713 65
S. A. Wheelwright .....	743 30
Walton Bros.....	740 61
Morton, Reed & Co.....	900 75

## Class No. 50. Files :

J. W. Buker .....	*477 85
A. P. Brown .....	656 75
Hyatt & Spencer.....	509 80
George P. Goff .....	498 97
S. A. Wheelwright .....	534 58
Walton Bros.....	523 40
George B. Curtis.....	576 06
Morton, Reed & Co.....	710 32

\* Accepted.

## Class No. 53. Tools for yard use :

David Babcock & Co....	\$230 00
J. W. Buker .....	*131 40
Hyatt & Spencer.....	183 42

## Class No. 54. Hardware :

David Babcock & Co....	1,190 55
J. W. Buker .....	1,091 69
A. P. Brown .....	1,448 11
Hyatt & Spencer .....	965 72
Thomas Poultney.....	*917 85

## Class No. 56. White lead :

David Babcock & Co....	625 00
J. W. Buker.....	550 00
A. P. Brown .....	650 00
Hyatt & Spencer.....	568 75
S. A. Wheelwright .....	*537 50
Walton Bros.....	575 00
Harrison Bros. & Co ....	554 50
Thomas Poultney .....	575 00

## Class No. 57. Zinc paint :

David Babcock & Co....	345 00
J. W. Buker .....	*270 00
A. P. Brown .....	375 00
Hyatt & Spencer .....	315 00
S. A. Wheelwright .....	315 00
Walton Bros.....	300 00
Harrison Bros. & Co ....	330 00
Thomas Poultney .....	345 00

## Class No. 58. Colored paints, driers :

David Babcock & Co....	342 50
J. W. Buker .....	373 00
A. P. Brown .....	597 50
Hyatt & Spencer .....	*270 00
S. A. Wheelwright .....	276 88
Walton Bros.....	280 65
Harrison Bros. & Co ....	290 00
Thomas Poultney .....	301 25

## Class No. 60. Varnish, spirits turpentine :

David Babcock & Co....	295 50
J. W. Buker .....	348 00
Hyatt & Spencer .....	*287 75
A. Wheelwright .....	303 20
Walton Bros.....	†274 50
Thomas Poultney .....	290 70

## Class No. 63. Sperm and lard oil :

David Babcock & Co....	245 00
J. W. Buker .....	225 00
A. P. Brown .....	312 50
Hyatt & Spencer .....	230 00
S. A. Wheelwright .....	235 00
Thomas Poultney .....	*207 50

† Bid withdrawn.

## Class No. 65. Glass :

J. W. Buker .....	\$350 40
A. P. Brown .....	393 85
Hyatt & Spencer .....	*299 00
George P. Goff .....	346 85
Walton Bros.....	371 70

## Class No. 69. Brushes :

J. W. Buker .....	*298 00
Hyatt & Spencer.....	299 30
S. A. Wheelwright .....	312 10

## Class No. 70. Dry goods for upholstery :

J. W. Buker.....	266 00
A. P. Brown .....	330 00
Hyatt & Spencer.....	*259 25
George P. Goff .....	396 14

## Class No. 71. Stationery :

William H. Dempsey....	*481 07
William Ballantyne.....	489 45
Warren Choate & Co....	487 56
T. Newton Kurtz.....	†463 69

## Class No. 73. Ship-chandlery :

David Babcock & Co....	1,421 17
J. W. Buker .....	*1,180 80
Hyatt & Spencer.....	1,279 82

## Opened in presence of—

I. HANSCOM, *Chief of Bureau.*H. A. GOLDSBOROUGH, *Chief Clerk.*B. T. HANLEY, *Clerk.*NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May 7, 1874.*

## Class No. 87. Bituminous coal :

J. W. Buker .....	\$7,500 00
A. P. Brown .....	4,890 00
William E. Griffith.....	*4,200 00
Hyatt & Spencer.....	4,900 00
Stephenson & Bro.....	4,890 00
L. W. Guinand.....	4,770 00
Walton Bros.....	6,650 00
R. T. Heiston.....	4,575 00
H. C. Winship .....	4,530 00
James Symington.....	4,980 00

## Class No. 88. Charcoal :

William T. Clarke.....	*270 00
J. W. Buker .....	600 00
A. P. Brown .....	810 00
Hyatt & Spencer.....	780 00
L. W. Guinand.....	330 00
Walton Bros.....	750 00
Arthur Fowler.....	720 00

## Class No. 89. Wood :

David Babcock & Co....	586 50
J. W. Buker.....	466 65
A. P. Brown.....	637 50
Stephenson & Bro.....	501 50
L. W. Guinand.....	*347 65
Walton Bros.....	1,360 00
Arthur Fowler.....	445 40
R. T. Heiston.....	382 50

*Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair of April 6, 1874, at the navy-yard, Norfolk, Va. :*

## Class No. 1. White-oak logs :

A. P. Brown.....	\$11,340 00
William White.....	7,920 00
Southard & Co.....	8,082 00
J. M. Richardson.....	10,800 00
Mann & Co.....	9,720 00
Watson & Pittinger.....	11,520 00
A. A. McCullough.....	11,700 00
Trickey & Jewett.....	9,000 00
Richard Fentress.....	8,550 00
A. H. Lindsay.....	*7,110 00
R. J. Neely.....	7,447 50

## Class No. 13. White-pine plank, boards :

A. P. Brown.....	2,200 00
J. W. Gaskill & Sons....	2,187 50
Southard & Co.....	2,075 00
Watson & Pittinger.....	2,350 00
A. A. McCullough.....	2,125 00
Trickey & Jewett.....	2,500 00
R. J. Neely.....	*1,974 50

\*Accepted.

## Class No. 15. White-ash, &amp;c. :

A. P. Brown .....	\$1,722 60
J. W. Gaskill & Sons....	1,255 80
Watson & Pittinger.....	1,240 50
A. A. McCullough.....	1,142 70
Trickey & Jewett.....	1,143 00
Richard Fentress.....	1,188 00
R. J. Neely.....	1,271 00
Joseph W. Duryee .....	*1,029 00

## Class No. 18. Black walnut, mahogany, &amp;c. :

A. P. Brown.....	140 00
J. W. Gaskill & Sons....	105 00
Watson & Pittinger.....	160 00
A. A. McCullough.....	*96 00
Trickey & Jewett.....	120 00
R. J. Neely.....	119 00
Joseph W. Duryee.....	100 00

† Received too late.

## Class No. 22. Cypress, cedar :

A. P. Brown.....	\$750 00
J. W. Gaskill & Sons....	*142 00
J. W. Buker.....	192 00
Watson & Pittinger.....	255 00
A. A. McCullough.....	207 00
Trickey & Jewett.....	150 00
R. J. Neely .....	207 00

## Class No. 25. Lignumvitæ :

A. P. Brown .....	232 50
J. W. Buker .....	327 50
George P. Goff.....	*170 00
Watson & Pittinger .. ..	775 00
A. A. McCullough.....	357 50
Trickey & Jewett.....	300 00
R. J. Neely .....	320 00

Class No. 32. Wrought-iron,  
round and square :

A. P. Brown .....	2,632 50
J. W. Buker .....	1,950 00
E. V. White & Co .. . . .	1,846 75
Hyatt & Spencer .....	1,511 00
George P. Goff .....	1,867 50
Walton Brothers.....	1,544 03
Thomas Poultney .....	*1,302 00
Catasanqua Manufactur- ing Co .. . . .	1,492 50

Class No. 33. Wrought-iron,  
flat :

A. P. Brown .....	1,371 50
J. W. Buker .....	1,055 00
Hyatt & Speneer .....	856 50
George P. Goff.....	1,105 75
Walton Bros.....	908 78
Thomas Poultney .....	856 50
Catasanqua Manufactur- ing Co.....	*836 50

## Class No. 35. Steel :

David Babcock & Co....	276 00
A. P. Brown .....	204 00
J. W. Buker.....	182 00
Hyatt & Spencer.....	172 80
George P. Goff .....	156 00
S. A. Wheelwright .....	*134 75
Walton Bros .....	160 00
Thomas Poultney.....	142 00
Morton, Reed & Co .....	188 40

## Class No. 37. Iron spikes :

A. P. Brown .....	342 00
J. W. Buker.....	259 00
Hyatt & Spencer.....	*199 50
George P. Goff .....	268 50
S. A. Wheelwright.....	272 50
Thomas Poultney .....	229 75
J. H. Wainwright.....	247 00
Morton, Reed & Co .....	247 00

## Class No. 39. Iron cut nails :

J. W. Buker .....	\$186 00
Hyatt & Spencer .....	213 75
George P. Goff.....	133 50
S. A. Wheelwright .....	219 50
Thomas Poultney .....	*132 25
J. H. Wainwright.....	218 05

## Class No. 42. Lead, pipe, sheet :

David Babcock .....	190 00
A. P. Brown .....	240 00
J. W. Buker .....	240 00
Hyatt & Spencer.....	*172 50
George P. Goff .....	195 00
S. A. Wheelwright .....	180 00
E. B. Lookins.....	260 00
Thomas Poultney .....	180 00

## Class No. 43. Zinc :

David Babcock & Co....	3,280 00
A. P. Brown .....	3,900 00
J. W. Buker .....	3,200 00
Hyatt & Spencer.....	*3,040 00
George P. Goff.....	3,160 00
Thomas Poultney.....	3,160 00

## Class No. 44. Tin :

David Babcock & Co....	693 75
A. P. Brown .....	1,325 00
J. W. Buker .....	975 00
Hyatt & Spencer.....	662 50
George P. Goff .....	712 50
S. A. Wheelwright .....	*612 50
Thomas Poultney.....	825 00

Class No. 48. Locks, hinges,  
&c. :

J. W. Buker .....	165 00
Hyatt & Spencer .....	*110 55
George P. Goff.....	130 50
E. B. Lookins.....	258 00

## Class No. 49. Screws :

J. W. Buker .....	96 95
E. V. White & Co.....	118 00
Hyatt & Spencer.....	*71 84
George P. Goff.....	98 10
S. A. Wheelwright.....	90 64
Walton Bros .....	86 11
Thomas Poultney.....	84 16
Morton, Reed & Co.....	110 27

## Class No. 50. Files :

A. P. Brown .....	973 25
J. W. Buker .....	915 20
E. V. White & Co.....	1,037 21
Hyatt & Spencer.....	859 12
George P. Goff.....	738 05
S. A. Wheelwright .....	867 71
E. B. Lookins.....	*716 50
Walton Bros .....	825 32
George B. Curtis.....	934 00
Morton, Reed & Co.....	1,158 45

\* Accepted.

## Class No. 51. Augers :

David Babcock & Co....	\$446 85
J. W. Buker .....	455 00
E. V. White & Co.....	500 31
Hyatt & Spencer.....	410 67
George P. Goff.....	*408 00
Walton Bros.....	476 55
Thomas Poultney.....	415 20

## Class No. 53. Tools for yard use :

David Babcock & Co....	202 50
J. W. Buker .....	171 60
Hyatt & Spencer.....	*150 00
George P. Goff.....	207 00
E. B. Lookins.....	222 00

## Class No. 54. Hardware :

J. W. Buker .....	*240 50
Hyatt & Spencer.....	335 65
E. B. Lookins.....	440 50
David Babcock & Co....	402 05

## Class No. 56. White lead :

David Babcock & Co....	990 00
A. P. Brown.....	970 00
J. W. Buker.....	910 00
E. V. White & Co.....	950 00
Hyatt & Spencer.....	853 75
George P. Goff.....	1,040 00
S. A. Wheelwright.....	830 00
E. B. Lookins.....	870 00
Walton Bros.....	845 00
Harrison Bros. & Co....	*826 60
Thomas Poultney.....	855 00

## Class No. 57. Zinc paint :

David Babcock & Co....	990 00
A. P. Brown.....	960 00
J. W. Buker.....	815 00
E. V. White & Co.....	900 00
Hyatt & Spencer.....	752 50
George P. Goff.....	1,040 00
S. A. Wheelwright.....	797 50
E. B. Lookins.....	885 00
Walton Bros .....	†700 00
Harrison Bros. & Co....	*751 00
Thomas Poultney.....	790 00

## Class No. 58. Colored paints, driers :

A. P. Brown.....	86 25
J. W. Buker.....	72 50
Hyatt & Spencer.....	36 25
S. A. Wheelwright.....	51 25
Walton Bros.....	55 90
Harrison Bros. & Co....	*35 00
Thomas Poultney.....	47 50

## Class No. 60. Varnish, spirits turpentine :

David Babcock & Co....	211 50
A. P. Brown.....	250 00

\* Accepted.

J. W. Buker .....	*\$137 50
Hyatt & Spencer.....	187 50
S. A. Wheelwright.....	185 00
Walton Bros.....	187 50
Thomas Poultney.....	210 00

## Class No. 69. Brushes :

J. W. Buker .....	*184 00
E. V. White & Co.....	331 00
Hyatt & Spencer.....	192 10
George P. Goff.....	325 94
S. A. Wheelwright.....	255 50

## Class No. 71. Stationery :

William H. Dempsey....	323 75
E. B. Lookins.....	614 20
William Ballantyne....	327 53
Warren Choate & Co....	*279 23
T. Newton Kurtz.....	307 92

## Class No. 73. Ship-chandlery :

J. W. Buker.....	*131 50
David Babcock & Co....	183 50
Hyatt & Spencer.....	194 75
George P. Goff.....	208 00
A. A. McCullough.....	204 00
E. B. Lookins.....	270 00

## Class No. 77. Belting, packing :

David Babcock & Co....	365 70
J. W. Buker .....	302 50
E. V. White & Co.....	384 10
Hyatt & Spencer.....	*255 03
S. A. Wheelwright .....	332 80
E. B. Lookins.....	461 50
Walton Bros.....	301 56
William A. Torrey & Co.	272 35
Thomas Poultney .....	334 35

## Class No. 78. Leather :

J. W. Buker.....	*192 80
Hyatt & Spencer.....	203 20
E. B. Lookins.....	251 00
William A. Torrey & Co.	210 50

## Class No. 86. Anthracite coal :

David Babcock & Co....	*1,116 00
A. P. Brown.....	1,548 00
Hyatt & Spencer.....	1,398 00
L. W. Guinand.....	1,390 00
Walton Bros.....	1,330 00
R. J. Neely.....	1,270 00
James Symington.....	1,262 00
Audenreid, Norton & Co.	1,260 00

## Class No. 87. Bituminous coal :

David Babcock & Co....	5,450 00
A. P. Brown.....	5,890 00
Hyatt & Spencer.....	6,150 00
L. W. Guinand.....	5,750 00
A. A. McCullough.....	5,540 00

† Bid withdrawn.

Walton Bros.....	\$6,650 00
R. T. Heiston.....	5,390 00
H. C. Winship .....	*5,200 00
Alexander Ray.....	5,330 00
R. J. Neely .....	5,790 00
James Symington.....	5,740 00
Robert Mowe.....	6,060 00

Class No. 88. Charcoal:	
J. W. Buker .....	\$1,000 00
E. V. White & Co.....	1,115 00
Hyatt & Spencer .....	1,120 00
A. A. McCullough.....	*980 00
E. B. Lookins. ....	1,600 00

Opened in presence of—  
I. HANSCOM, *Chief of Bureau.*  
H. A. GOLDSBOROUGH, *Chief Clerk.*  
B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, *May 7, 1874.*

*Offers to furnish material for the Navy, under the advertisement of the Bureau of Construction and Repair of April 6, 1874, at the navy-yard, Mare Island, Cal.*

Class No. 32. Wrought iron, round and square:	
Hyatt & Spencer .....	\$1,168 00
Farwell & Co .....	*1,025 00
A. P. Brown.....	1,950 00
Van Winkle & Daven- port.....	1,170 00

Class No. 33. Wrought iron, flat:	
Hyatt & Spencer .....	887 00
Farwell & Co.....	*677 50
A. P. Brown.....	1,267 50
Van Winkle & Daven- port.....	805 00

Class No. 43. Zinc:	
Hyatt & Spencer.....	1,000 00
Farwell & Co .....	*800 00
A. P. Brown .....	1,200 00
David Babcock & Co....	840 00
Van Winkle & Daven- port.....	1,000 00

Class No. 44. Tin:	
Hyatt & Spencer.....	760 00
Farwell & Co.....	*640 00
A. P. Brown.....	1,060 00
David Babcock & Co....	725 00

Class No. 48. Locks, hinges, &c.:	
Hyatt & Spencer .....	55 20
Farwell & Co.....	*22 72

Class No. 49. Screws:	
Hyatt & Spencer .....	705 88
Farwell & Co.....	*643 70
A. P. Brown.....	1,385 00
Van Winkle & Daven- port.....	998 14

Class No. 50. Files:	
Hyatt & Spencer .....	\$240 00
Farwell & Co.....	*212 50
A. P. Brown.....	580 00

Class No. 51. Augers:	
Hyatt & Spencer .....	728 65
Farwell & Co.....	*661 75
A. P. Brown .....	2,214 00

Class No. 53. Tools for yard use:	
Hyatt & Spencer .....	418 60
Farwell & Co .....	*391 05

Class No. 54. Hardware:	
Hyatt & Spencer.....	603 80
Farwell & Co.....	*544 90

Class No. 56. White lead:	
F. B. Taylor & Co.....	318 50
Farwell & Co .....	297 70
Sullivan, Kelley & Co...	*260 00
Whittier, Fuller & Co ..	312 00
A. P. Brown.....	416 00

Class No. 57. Zinc paint:	
F. B. Taylor & Co .....	150 00
Farwell & Co.....	141 25
Sullivan, Kelley & Co...	*105 00
Whittier, Fuller & Co...	180 00
A. P. Brown.....	255 00

Class No. 58. Colored paints, dryers:	
F. B. Taylor & Co .....	371 50
Hyatt & Spencer .....	599 50
Farwell & Co .....	*285 45
Sullivan, Kelley & Co...	293 20
Whittier, Fuller & Co ..	406 00
A. P. Brown.....	972 00

\* Accepted.

Class No. 60. Varnish, spirits  
turpentine :

F. B. Taylor & Co .....	\$200 00
Hyatt & Spencer.....	237 50
Farwell & Co.....	*147 50
Sullivan, Kelley & Co...	150 00
Whittier, Fuller & Co...	180 00
A. P. Brown.....	312 50

## Class No. 63. Sperm oil :

F. B. Taylor & Co .....	210 00
Hyatt & Spencer.....	350 00
Farwell & Co.....	179 00
Sullivan, Kelley & Co...	*150 00
Whittier, Fuller & Co ..	190 00
A. P. Brown.....	250 00

## Class No. 65. Fish-oil :

F. B. Taylor & Co.....	25 00
Hyatt & Spencer.....	100 00
Farwell & Co.....	19 50
Sullivan, Kelley & Co...	*17 50
Whittier, Fuller & Co...	25 00

## Class No. 69. Brushes:

F. B. Taylor & Co.....	241 50
Hyatt & Spencer.....	257 00
Farwell & Co.....	*175 00
Sullivan, Kelley & Co...	250 00
Whittier, Fuller & Co...	281 50

Opened in presence of—

I. HANSCOM, *Chief of Bureau.*H. A. GOLDSBOROUGH, *Chief Clerk.*B. T. HANLEY, *Clerk.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION AND REPAIR, May 7, 1874.

## Class No. 71. Stationery :

William H. Dempsey ....	\$637 68
L. H. Bonestall.....	*411 60
William Ballantyne.....	432 48

## Class No. 73. Ship-chandlery :

Hyatt & Spencer.....	825 00
Farwell & Co.....	*509 00

Class No. 77. Belting, pack-  
ing :

Hyatt & Spencer.....	1,512 50
Farwell & Co.....	1,249 50
William A. Torrey & Co.	*1,104 50
H. N. Cook.....	1,372 50

## Class No. 78. Leather:

Hyatt & Spencer.....	165 00
Farwell & Co.....	*106 00
H. N. Cook .....	45 00

## Class No. 85. Anthracite coal :

Farwell & Co.....	3,440 00
A. P. Brown .....	3,963 20
David Babcock & Co....	3,348 00
James Symington.....	*3,158 40

## Class No. 87. Bituminous coal :

Farwell & Co.....	*3,150 00
A. P. Brown .....	3,715 50
David Babcock & Co....	3,930 00

No. 11.

## MARINE CORPS.

HEADQUARTERS MARINE CORPS,

Washington, D. C., October 24, 1874.

SIR: I have the honor to report to the Department that at the usual inspections of the corps during the past year the troops at the several stations were found in excellent order, and their discipline and efficiency all that could be desired. The barracks and other public property under their immediate charge were also found in their usual good condition, and will require nothing during the coming year but the ordinary attention and repairs provided by the annual appropriations to keep them so.

The old ship Saint Lawrence, so long used as a barracks at Norfolk, having been declared unfit for further use as such, a small temporary



building has been erected in the navy-yard for the accommodation of the men at that station.

The change was a much-needed one, as well for the health and comfort of the men as for their discipline and military efficiency; for the time and labor necessary to keep a large ship in good order can now be employed in their proper military duties, drill, &c.

Congress, at its last session, having limited the appropriation for the support of the Marine Corps to 1,500 privates, all recruiting was immediately stopped, and that grade reduced by discharge to the number designated. As the complement of marines on board of vessels in commission still remains the same, this reduction had to be made from the several naval stations on shore. As may be supposed, this has left a very small number of men at each of these stations; a force in my opinion entirely inadequate to perform the duties required of it.

It is hardly necessary for me to say that the complement of marines on board vessels in commission should not, under any circumstances, be reduced below what it is at present; for, in the opinion of all our naval commanders the number should be rather increased than diminished. Nor is it necessary for me to call the attention of the Department to what has been so often recommended and urged by all naval commanders, that there should be a larger force of marines at our principal navy-yards to guard the immense amount of public property stored therein; to furnish well-drilled, effective men for the relief of guards returning from sea, and to be always in readiness for any emergency that could arise requiring the services of troops. It has always been considered that at New York, Boston, Philadelphia, and Norfolk, there should at all times be a force of at least 150 men in readiness for immediate service; yet with the corps up to its authorized standard, there is but one of these stations that could furnish 50 efficient troops for active service; while at the headquarters of the corps, the general depot for the instruction and drill of the young officers and recruits entering the service, scarcely 25 privates can be mustered at an ordinary company drill. It is manifestly impossible, with so small a force as this, to impart that military instruction and training so necessary to make a thorough soldier, and I regret that in some instances I am compelled to send new recruits to sea before they can acquire that experience and instruction so desirable to make them good, efficient soldiers on board ship. For these and other reasons not necessary to adduce, the late reduction has, in my judgment, operated injuriously to the service.

When we consider the vast amount of public property at our naval stations; the very great importance of having a body of well-disciplined and reliable troops at these important points, in readiness at all times for immediate service with the Navy or Army, or with the municipal or State authorities in any civil commotion where the presence of troops might be necessary, I cannot think that Congress would regard a force of at least 150 men at each of these stations as too great a number for the demands of the service. I therefore would respectfully and urgently recommend that the 500 men discharged in compliance with the desire of Congress may be again enlisted.

The estimates of the disbursing officers of the corps transmitted to the Department a few weeks ago have been prepared with this view, and I trust the Department may recommend the desired appropriation to restore to the service the men temporarily disbanded.

The yellow fever has again visited our most southern navy-yard, and the corps has to regret the loss of one of its most gallant young officers, Lieut. William B. Slack, and one-fifth of the enlisted men of the com-

mand. Fortunately, however, there were at the time but three officers and thirty-five enlisted men on duty at the station.

If it be the intention of the Government to maintain this naval station, some provision should be made to rebuild, on its former site, the barracks destroyed during the late rebellion, as the temporary building now used by the marines is, from its structure and location, unsuited for the purpose.

I am, very respectfully, your obedient servant,

J. ZEILIN,  
*Brigadier-General and Commandant.*

Hon. GEO. M. ROBESON,  
*Secretary of the Navy.*

HEADQUARTERS MARINE CORPS,  
*Paymaster's Office, August 29, 1874.*

SIR: I have the honor to submit herewith estimates, in triplicate, for the pay of officers, non-commissioned officers, musicians, privates, and others of the United States Marine Corps, for the fiscal year ending June 30, 1876. These estimates exceed in amount the sum appropriated for the current fiscal year by \$128,170, being for the pay of 500 privates, pay for "undrawn clothing," and for traveling allowance to officers, for which no appropriation was made for the present year.

I also submit estimates for deficiencies for the present fiscal year for "undrawn clothing," and for traveling allowance to officers.

I am, very respectfully, yours, &c.,

J. C. CASH,  
*Paymaster United States Marine Corps.*

Brig. Gen. JACOB ZEILIN,  
*Commandant United States Marine Corps,  
Headquarters.*

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1876  
by the Paymaster of the United States Marine Corps.*

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1875.
PAY OF OFFICERS, NON-COMMISSIONED OFFICERS, MUSICIANS, PRIVATES, AND OTHERS OF THE UNITED STATES MARINE CORPS.		
1 brigadier-general, commandant.....	\$5,500 00	
1 colonel.....	4,500 00	
2 lieutenant-colonels.....	8,000 00	
1 lieutenant-colonel retired.....	3,000 00	
4 majors, per act of June 30, 1834, (4 Stat. at L., p. 713, sec. 4, 5).....	13,750 00	
2 majors, retired, per act of March 2, 1847, (9 Stat. at L., p. 155, sec. 3).....	4,875 00	
1 adjutant and inspector, 1 quartermaster, and 1 paymaster, per act of August 5, 1854, (10 Stat. at L., p. 586, sec. 1.)	10,500 00	
2 assistant quartermasters, per act of February 21, 1857, (11 Stat. at L., p. 163, sec. 1.)	5,200 00	
assistant quartermaster, retired, per act of July 17, 1862, (12 Stat. at L., p. 594, sec. 2.)	2,100 00	
20 captains, per act of June 30, 1864, (13 Stat. at L., p. 144, sec. 1).....	44,100 00	
4 captains, retired, per act March 3, 1865, (13 Stat. at L., p. 487, sec. 1).....	6,615 00	
30 first lieutenants, per act July 28, 1866, (14 Stat. at L., p. 334, sec. 13).....	52,500 00	
30 second lieutenants, per act of July 28, 1866, (14 Stat. at L., p. 337, sec. 37)...	44,100 00	
2 second lieutenants, retired, per act March 2, 1867, (14 Stat. at L., p. 422, sec. 1.)	2,100 00	
1 leader of the band, per act of March 2, 1867, (14 Stat. at L., p. 517, sec. 7)...	948 00	

*Estimates of appropriations required for the fiscal year, &c.—Continued.*

Detailed objects of expenditure and explanation	Estimated amount	Amount appropriated for the current fiscal year ending June 30, 1875.
PAY OF OFFICERS, NON-COMMISSIONED OFFICERS, MUSICIANS, PRIVATES, AND OTHERS OF THE UNITED STATES MARINE CORPS—Continued.		
1 apothecary, per act July 15, 1870 .....	750 00	
1 sergeant-major, 1 quartermaster-sergeant, and 1 drum-major, per act July 8, 1816.	1,000 00	
50 first sergeants, Navy Regulations .....	16,200 00	
140 sergeants .....	31,560 00	
140 corporals .....	35,400 00	
7 musicians of the band .....	9,996 00	
4 drummers and fifers .....	17,728 00	
2,000 privates .....	360,000 00	
4 clerks to brigadier-general, adjutant and inspector, quartermaster, and paymaster .....	12,283 00	
1 messenger at headquarters .....	971 00	
1 clerk and 1 messenger at assistant quartermaster's office, Philadelphia. .	1,576 00	
Payments to discharged soldiers for clothing not drawn. ....	25,000 00	
Allowance to officers traveling under orders without troops or supplies .....	8,000 00	
	728,930	\$600,760

Respectfully submitted.

J. C. CASH,  
Paymaster Marine Corps.

**HEADQUARTERS MARINE CORPS, QUARTERMASTER'S OFFICE,**  
*Washington, D. C., August 31, 1874.*

SIR: I have the honor to submit herewith duplicate estimates of appropriations required for the service of the fiscal year ending 30th June, 1876, by the Quartermaster's Department, Marine Corps.

These estimates vary from those submitted for fiscal year ending 30th June, 1875, as follows:

Clothing, decreased .....	\$12,769
Repair of barracks, increased .....	9,000
Hire of quarters, decreased .....	936
Forage, decreased .....	1,500

The aggregate amount of these estimates is \$6,205 less than that asked in estimates of previous year. The increase for repair of barracks is based upon the report of boards of survey which have been held upon the public buildings at the several posts, and the estimates submitted as the probable cost of putting and keeping them in good condition.

I also inclose, in duplicate, estimates for deficiencies in appropriations for contingencies, fiscal year ending 30th June, 1874, and for hire of quarters for officers where there are no public quarters, and forage for public horses and the authorized number of officers' horses, for fiscal year ending 30th June, 1875.

Duplicate schedules of proposals received for rations, fuel, and supplies, current fiscal year, are also transmitted.

I am, very respectfully, your obedient servant,

W. B. SLACK,  
Quartermaster Marine Corps.

Brig. Gen. JACOB ZEILIN,  
Commandant Marine Corps,  
Headquarters, Washington, D. C.

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1876,  
by the Quartermaster's Department, Marine Corps.*

Detailed objects of expenditure and explanations.	Estimated amount which will be re- quired for each detailed object of expenditure.	Amount appropri- ated for the cur- rent fiscal year ending June 30, 1875.
<b>PROVISIONS.</b>		
1,333 non-commissioned officers, musicians, privates, and washerwomen 365 days, one ration per day, 486,545, at 25 cents per day, is .....	\$121,636 25	\$100,000 00
<b>CLOTHING.</b>		
2,500 non-commissioned officers, musicians, and privates, at \$39.68 per annum, (actual cost per contract, 1874 and 1875,) is \$99,200, and 1,000 watch-coats, at \$9.51 each, is in all \$108,710 .....	108,710 00	100,000 00
<b>FUEL.</b>		
4,408 cords of wood, as follows: One brigadier-general, one colonel, two lieutenant-colonels, four majors, three staff-majors, twelve captains, two staff-captains, thirty first and second lieutenants, thirteen hundred and thirty-three non-commissioned officers, musicians, privates, and washer- women, six hospitals, one armory, seven mess-rooms for officers, sixteen offices for commandant and staff and commanding officers at posts, eight rooms for officers of the day, ten guard-rooms at barracks and navy-yards, three clothing and other supply stores. One-fourth additional on 2,400 cords, quantity supposed to be required in latitude north 36 degrees from 1st September to 30th April, 600 cords, amounting to in all 4,408 cords, which, at \$7 per cord, is .....	30,856 00	30,856 00
<b>MILITARY STORES.</b>		
Pay of mechanics, repair of arms, purchase of accoutrements, ordnance- stores, flags, drums, fife, and other instruments .....	12,000 00	9,000 00
<b>TRANSPORTATION AND RECRUITING.</b>		
Transportation of troops, and for expenses of recruiting .....	12,000 00	5,000 00
<b>REPAIR OF BARRACKS.</b>		
Viz: Portsmouth, N. H., Boston, Mass., Brooklyn, N. Y., Philadelphia, Pa., Annapolis, Md., headquarters, Washington, D. C., navy-yard, Washing- ton, D. C., Norfolk, Va., Pensacola, Fla., and Mare Island, California .....	21,000 00	6,000 00
<b>HIRE OF QUARTERS.</b>		
Hire of quarters for officers where there are no public buildings .....	17,064 00	10,000 00
<b>FORAGE.</b>		
Forage for public horses and the authorized number of officers' horses .....	6,000 00	3,000 00
<b>CONTINGENCIES.</b>		
For freight, ferriage, toll, cartage, purchase and repair of boats, per diem for constant labor, funeral expenses of marines, stationery, telegraphing, apprehension of deserters; oil, gas, candles; repair of gas and water fixtures; water-rent; barrack-furniture; furniture for Government houses and offices, packing-boxes, bed-sacks, wrapping-paper, oil-cloth, crash, rope, twine, carpenters' tools, tools for police purposes, purchase of fire-extinguishers, purchase and repair of hose, repairs to public carryall, purchase and repair of harness, purchase and repair of hand-carts and wheelbarrows, purchase and repair of cooking-stoves, ranges, &c., stores where there are no grates; gravel, &c., for parade-grounds, repair of pumps, and for other purposes .....	40,000 00	20,000 00
<b>PRINTING, ETC.</b>		
For printing and binding, to be executed under the direction of the Congressional Printer, per act of May 8, 1872 .....	5,000 00	
	374,266 25	253,856 00

Respectfully submitted.

W. E. SLACK.  
Quartermaster Marine Corps

## DEFICIENCIES.

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1875,  
by the Quartermaster's Department, Marine Corps.*

Detailed objects of expenditure and explanations.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1875.
<b>HIRE OF QUARTERS.</b>		
Hire of quarters for officers where there are no public buildings .....	\$7,064 00	\$10,000 00
<b>FORAGE.</b>		
For public horses and for the authorized number of officers' horses .....	3,000 00	3,000 00

Respectfully submitted.

W. B. SLACK, *Quartermaster Marine Corps.*

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1874,  
by the Quartermaster's Department, Marine Corps.*

Detailed objects of expenditure and explanations.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the fiscal year ending June 30, 1874.
<b>CONTINGENCIES.</b>		
For gas, water-rent, stationery, repairing stoves, brooms, buckets, and furniture at marine barracks, Brooklyn, N. Y. ....	\$2,555 63	.....

Respectfully submitted.

W. B. SLACK, *Quartermaster Marine Corps.*

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1871,  
by the Quartermaster's Department, Marine Corps.*

Detailed objects of expenditure and explanations.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the fiscal year ending June 30, 1871.
<b>CONTINGENT.</b>		
For amount found due by the Fourth Auditor of the Treasury in settlement of claim of Francis Scala, late leader of the marine band, for commutation of quarters, as per letter attached .....	\$757 80	.....

Respectfully submitted.

W. B. SLACK, *Quartermaster Marine Corps.*

TREASURY DEPARTMENT,  
*Fourth Auditor's Office, September 9, 1874.*

SIR: In compliance with a request from the attorney in the case, you are informed that in the settlement of the claim of Francis Scala, late leader of the marine band, for commutation of quarters, it was found that the sum of \$757.80 was due him, and that the amount should be paid from the appropriation contingent Marine Corps, 1870-71. That appropriation having been exhausted, the certificate cannot be issued until Congress shall have made provision for its payment.

Very respectfully,

S. J. W. TABOR, *Auditor.*

Maj. W. B. SLACK,  
*Quartermaster U. S. Marine Corps, Headquarters, Washington, D. C.*

*Abstract of offers received for furnishing rations, fuel, and supplies to the United States Marine Corps, under the cognizance of the Quartermaster's Department.*

Offers for rations under advertisement dated April 28, 1874 :

At Portsmouth, N. H. :

	Per hundred.
Jacob Baum .....	\$33 00
John C. Gilbert .....	30 00
Peter Higgins .....	30 00
N. F. Mather .....	*29 50

At Charlestown, Mass. :

Jacob Baum .....	32 50
John C. Gilbert .....	30 00
Peter Higgins .....	28 45
N. F. Mather .....	*28 30

At Brooklyn, N. Y. :

Jacob Baum .....	29 89
John C. Gilbert .....	*23 45
Peter Higgins .....	27 00
N. F. Mather .....	27 50

At Philadelphia, Pa. :

Jacob Baum .....	30 64
Philip Justus .....	22 43
Walter Reckless .....	*22 35

At Gosport, Va. :

	Per hundred.
Jacob Baum .....	\$30 00
Kimberly Brothers .....	*23 1 $\frac{1}{2}$
David F. Keeling .....	23 20
N. F. Mather .....	29 20

At Annapolis, Md. :

Jacob Baum .....	28 90
John C. Gilbert .....	*20 55
Jackson Brewer .....	20 90
N. F. Mather .....	29 50

At Pensacola, Fla. :

Kimberly Brothers .....	40 00
T. C. Quayle .....	23 55
Hugh McHatton .....	25 22
N. F. Mather .....	*23 50

At Washington, D. C. :

Jacob Baum .....	28 45
H. W. Hall .....	*16 25
N. F. Mather .....	24 60

At Mare Island, Cal. :

N. F. Mather .....	*30 00
--------------------	--------

Offers for fuel under advertisement dated May 4, 1874 :

At Portsmouth, N. H. :

	Wood, per cord.
N. F. Mather .....	\$9 95
George A. Hammond .....	11 48
Samuel G. French .....	*9 10
Joseph L. Savage .....	11 60
C. E. Walker & Co .....	10 00

	Coal, per ton.
N. F. Mather .....	8 23
George A. Hammond .....	8 75
Samuel G. French .....	8 22
Joseph L. Savage .....	*7 95
C. E. Walker & Co .....	8 25
William H. Sise .....	9 49

At Charlestown, Mass. :

	Wood, per cord.
Samuel Knight .....	12 00
Howard Snelling .....	13 00
Samuel G. French .....	*8 95
Joseph L. Savage .....	10 80

	Coal, per ton.
Samuel Knight .....	\$8 00
Howard Snelling .....	9 50
Samuel G. French .....	7 88
Joseph L. Savage .....	*7 85

At Brooklyn, N. Y. :

	Wood, per cord.
Chauncey M. Felt .....	\$10 33
Samuel G. French .....	8 75
Joseph L. Savage .....	*8 70

	Coal, per ton.
Chauncey M. Felt .....	6 97
Samuel G. French .....	*6 44
Joseph L. Savage .....	7 65

At Philadelphia, Pa. :

	Wood, per cord.
Francis D. Watson .....	8 75
James J. Convery .....	7 79
Samuel G. French .....	8 75
Joseph L. Savage .....	*6 75
Walter Reckless .....	8 44
James Ballenger .....	7 75

	Coal, per ton.
James J. Convery .....	*5 62
Plaisted & McCollier .....	6 93
Samuel G. French .....	6 15
Joseph L. Savage .....	7 45
James Ballenger .....	7 75

\* Accepted.



## At Washington, D. C.:

	Wood, per cord.
John McElroy.....	\$6 45
S. T. Suit .....	6 47
Charles W. King.....	6 09
Joseph L. Savage .....	*5 20
T. W. Brown.....	7 00
W. H. Barbour .....	6 84
T. E. Clark & Co.....	6 48

## At Annapolis, Md.:

	Wood, per cord.
B. H. Classen .....	9 00
John Kealy.....	7 00
Sol. Philips.....	6 90
Joseph L. Savage .....	*6 40

## At Washington, D. C.:

	Coal, per ton.
L. W. Guinand.....	6 54.
John McElroy .....	6 95
Joseph L. Savage .....	*6 00
W. H. Barbour .....	6 98
T. E. Clark & Co.....	6 74

## At Gosport, Va.:

	Wood, per cord.
Peters Brothers.....	\$5 90
Robert J. Neely.....	*5 15
Joseph L. Savage.....	5 20
	Coal, per ton.
Peters Brothers .....	7 90
Robert J. Neely.....	7 48
Joseph L. Savage .....	*7 45

## At Mare Island, Cal.:

	Wood, per cord.
N. F. Mather .....	16 00
James McCudden .....	*15 00
	Coal, per ton.
N. F. Mather.....	33 00
James McCudden .....	30 00
Samuel G. French.....	*20 20

## At Pensacola, Fla.:

	Wood, per cord.
T. C. Quayle .....	5 97
Hugh McHatton .....	*5 92

## Offers for supplies under advertisement dated May 1, 1874:

## Class No. 1. Kerseys, &amp;c.:

William I. Gregory.....	\$37,536 00
L. & D. Yanney.....	31,454 00
Peter Higgins.....	37,460 00
Walton Brothers.....	33,060 00
Perry & Co.....	33,890 00
Tingne, House & Co ....	590 00
William Mathews.....	29,592 00
R. S. Allen .....	31,219 00

Walton Brothers.....	**\$3,220 00
Perry & Co.....	5,253 00

## Class No. 5. Military equipments:

Hartmann Bros. & Co...	**827 10
Walton Brothers.....	*1,183 00
Perry & Co.....	2,249 95

## Class No. 6. Bootees:

C. R. Williamson & Son..	11,820 00
William McKnight.....	13,500 00
Walton Brothers.....	12,540 00
Perry & Co.....	13,200 00
Jacob Roedel & Son ....	*10,500 00

## Class No. 7. Waist-belts, &amp;c.:

Hartmann Bros. & Co...	**1,935 50
Walton Brothers.....	**949 00
Perry & Co.....	3,169 90

## Class No. 8. Making and trimming clothing:

Jacob Reed.....	20,940 50
Abraham Thorp.....	17,046 80
William F. Jobbins .....	20,873 80
Walton Brothers.....	44,050 00
Perry & Co.....	44,836 20
Bell, Rafferty & Co.....	61,435 00
William Mathews.....	20,757 00
R. S. Allen.....	*16,312 20

## Class No. 2. Flannels, &amp;c.:

William I. Gregory.....	10,588 00
L. & D. Yanney .....	9,424 00
Peter Higgins.....	12,908 80
Walton Brothers.....	12,028 00
Perry & Co.....	13,480 00
Tingne, House & Co ....	
William Mathews.....	11,960 00
R. S. Allen .....	*10,138 00

## Class No. 3. Linens, &amp;c.:

James Duncan & Co ....	†1,620 00
Peter Higgins.....	10,250 00
Walton Brothers.....	10,115 00
Perry & Co.....	10,550 00
William Mathews.....	**4,695 00
R. S. Allen.....	**3,810 00

## Class No. 4. Uniform caps, &amp;c.:

Bent & Bush .....	**1,597 00
Hartmann Bros. & Co...	5,352 50

W. B. SLACK,  
Quartermaster Marine Corps.

HEADQUARTERS MARINE CORPS, QUARTERMASTER'S OFFICE,  
Washington, August 31, 1874.

\* Accepted entire class.

\*\* Accepted for part of a class.

† For part of a class.

No. 12.

## LANDING OF DETACHMENTS AT HONOLULU.

No. 9.]

FLAG-SHIP RICHMOND, SAN FRANCISCO,  
March 18, 1874.

SIR: I have the honor to inform you to-day by telegraph of the election of Kalakaua as king of the Sandwich Islands; also the landing of a detachment of seamen and marines from the United States steamships Tuscarora and Portsmouth, by direction of Commander Belknap, senior officer present, for the preservation of peace, the protection of American interests and foreign residents. These men were landed at the request of the authorities, through our minister resident.

A detachment was also landed from Her Britannic Majesty's steamship Tenedos.

The prompt appearance of these detachments restored order, prevented the shedding of blood, and the further destruction of property.

Subsequently, the government having made arrangements for the preservation of order, the detachments were withdrawn.

I inclose herewith copy of Captain Hopkins's report.

The Benicia arrived at Honolulu on the 27th ult., and will remain there until further orders.

Very respectfully, your obedient servant,

A. M. PENNOCK,  
*Rear-Admiral, Commanding United States Naval Force on  
North Pacific Station.*

Hon. GEO. M. ROBESON,  
*Secretary of the Navy, Washington, D. C.*

UNITED STATES STEAMER BENICIA, (2d rate,)  
HONOLULU, HAWAIIAN ISLANDS,  
March 5, 1874.

ADMIRAL, SIR: I have the honor to report the arrival from Panama, on the 26th ultimo, of the ship under my command, in obedience to your order dated Honolulu, H. I., November 12, 1873, making a passage of sixty-five days. Having crossed the line to the eastward of the Gallapagos Islands, I made as far as  $3^{\circ} 30'$  south, encountering light airs from the southeast, and sailing at the rate of from one to two and a half knots per hour, until well to the northward of the line, which I recrossed in longitude  $117^{\circ} 30'$  west.

Upon my arrival here, I found the United States steamer Tuscarora, Commander George E. Belknap, and the United States steamer Portsmouth, Commander Joseph S. Skerrett, at anchor. I heard of the death of His Majesty, the late King Lunalilo, whose body was still lying at the Jobani palace; and also of the riot occasioned by the election of his present Majesty King Kalakaua to the throne. Previous to my arrival, at the request of the minister of foreign affairs, through our minister resident, Hon. Henry A. Peirce, a detachment of men were landed by Commander George E. Belknap, senior officer present, from the United States steamer Tuscarora, and the United States steamer Portsmouth, for the preservation of the peace and the protection of the foreign residents, when the riot immediately ceased. A detachment was also landed from Her Britannic Majesty's ship Tenedos. I communicated with his

excellency the governor of Oahu, tendering the usual courtesies, which were accepted, and the national flag of Hawaii was saluted with 21 guns, the salute being returned gun for gun.

The funeral of his late Majesty Lunalilo the First, took place on the 28th of February. A battalion of 300 sailors and marines from the *Benicia*, *Tuscarora*, and *Portsmouth*, consisting of seven companies, under command of Lieut. Commander J. D. Graham, executive officer of the *Benicia*, were assigned a position in the line, and, with the exception of a detachment from Her Britannic Majesty's ship *Tenedos*, and one company of native cavalry, formed the only troops present.

After the deposition of the body in the royal mausoleum, the usual volleys were fired by the company of marines under command of Lieut. H. G. Ellsworth, United States Marine Corps, attached to the United States steamer *Benicia*. The battalion made an excellent appearance, and I was very much gratified at the uniform good conduct of the men.

The captains and officers of the three vessels also attended the funeral in a body.

His Majesty King Kalakaua, having, through his minister of foreign affairs, the Hon. W. L. Green, expressed his pleasure to receive the American officers, I, accompanied by the captains and officers of the several ships, received the honor of being presented to His Majesty, by his excellency (our minister resident) Hon. Henry A. Peirce.

An invitation was extended to His Majesty to visit the American men-of-war in the harbor, by the American minister. His Majesty was pleased to appoint Friday, the 6th day of March, when he will be received with the customary honors.

I have the honor to inclose a copy of a communication received from his excellency the minister of foreign affairs, which I shall publish at the first general muster of the ship's company.

I am, sir, very respectfully, your obedient servant,

WM. E. HOPKINS,

*Captain U. S. Navy, Commanding.*

Rear-Admiral A. M. PENNOCK, U. S. N.,

*Commanding U. S. Naval Force on North Pacific Station.*

• DEPARTMENT OF FOREIGN AFFAIRS,  
*Honolulu, March 2, 1874.*

SIR: The King has commanded me to thank you specially in his name for your attendance at the funeral of his late Majesty, along with your officers, sailors, and marines of the United States steamer *Benicia* under your command, and which added so much to the solemnity of the occasion.

With the assurance of the highest respect and distinguished consideration, I have the honor to be, sir, your most obedient servant,

W. L. GREEN.

Capt. WM. E. HOPKINS,

*Commanding U. S. Steamer Benicia.*

UNITED STATES STEAMER *TUSCARORA*, (3d rate,) *Honolulu, Hawaiian Islands, February 21, 1874.*

SIR: The legislative assembly of this kingdom met in the court-house at this capital, at 12 o'clock noon, the 12th instant, in accordance with

the proclamation of the ministry issued immediately after the death of Lunalilo, the late King.

Three hours were occupied in the preliminaries of organization, when the assembly proceeded to choose by ballot a person to fill the vacant throne.

The result was the choice of Prince David Kalakaua by a majority of thirty-three (33) votes, thirty-nine (39) votes having been cast for him, and six (6) votes for the Queen Dowager Emma.

The grounds of the court-house had been thronged with people from an early hour, many of whom were the adherents of Queen Emma. These latter crowded to the front, and when the result of the balloting became known a fierce murmur of discontent arose among them, some shouting that "Emma was the people's choice; that they had been cheated and would not have Kalakaua for King."

The vice-president of the assembly, himself a partisan of Queen Emma, appeared on the balcony, and endeavored to quiet the people, but no heed was paid him, and when the committee appointed to notify Kalakaua of his election attempted to leave the grounds they were assaulted and forced to retreat into the building. One of them, who had reached his carriage, was torn from it, and barely escaped with his life.

The noise, excitement, and exasperation of the malcontents grew stronger every moment, until finally, some of the more daring spirits began to smash in the windows and doors, which had been closed. Then ensued a scene lamentable to behold. The rioters rushed into the building, and entering the offices of the attorney-general, judges, and marshal, smashed all the furniture and threw it into the street and grounds, together with the books, archives, and other valuable documents and papers.

This work accomplished, they poured up-stairs into the court-room and attacked the members who had voted for Kalakaua, with sticks, broken-chair legs, and anything they could lay their hands on.

Meanwhile, the police had torn off their badges, and mingled with the crowd outside, and, as the volunteer troops could not be trusted, no effort was made to call them out. The government was therefore powerless to act, but still hesitated to ask foreign aid.

Finally, when two or three of the members had been carried out senseless and several others badly hurt, Minister Bishop and the King elect asked, through our minister resident, Mr. Peirce, the intervention of our naval forces here.

Commander Skerrett and myself had accompanied Mr. Peirce, and been present throughout the whole of these proceedings, the more promptly to act should occasion require it.

In the morning I had stationed an officer on board the American bark Murray, lying alongside the wharf, to signal to the ships in case of trouble, and both ships, the Tuscarora and Portsmouth, were prepared to land the forces detailed at a moment's notice.

So soon, therefore, as the request was made, the signal was hoisted, and Commander Skerrett and myself went on board to superintend the debarkation personally.

In scarcely more than fifteen minutes companies comprising one hundred and fifty officers, blue-jackets and marines, including a Gatling gun from the Portsmouth were landed and marched to the scene of action.

As the battalion neared the court-house, the rioters ran out of the building from the rear, most of whom went up to Queen Emma's, while a few remained and mingled with the crowd who had taken no part in the disturbance.

The court-house was immediately occupied and sentries posted, at the request of the authorities, and, with the exception of some loud talk, no further demonstration was made.

About half an hour after our occupancy, a detachment of officers and men from Her Majesty's steamer Tenedos arrived on the grounds, and it was rather a significant circumstance that their approach was welcomed with cheers from the native populace, while the force from the Tuscarora and Portsmouth had been received in silence.

Soon after our intervention the authorities were urged to make arrests, but nothing of the kind was attempted for an hour or more, when the riot-act was read, and, at the solicitation of the governor, assistance was given the marshal in the arrest of three or four of the ringleaders, who had remained on the grounds. The crowd then quickly and quietly dispersed.

In the mean time the English force, at the instance of the government, marched up to Queen Emma's and dispersed the crowd which had collected in the grounds about her residence, and also assisted in arresting several persons who were pointed out as having been engaged in the riot.

At sunset order prevailed everywhere, and it was a subject for congratulation that, though some of the rioters were known to have been armed, no shots were fired during the day.

At the request of the government, made through Mr. Peirce, our force was distributed as follows for the night, viz: The company from this ship occupied the armory, under the command of Lieut. Commander Theo. F. Jewell, with a detachment of marines, under Ordnance Sergeant Theo. Hoff, stationed at the prison, while the officers and men from the Portsmouth remained at the court-house, under the command of Lieut. Commander Lewis Clark, with a guard of marines posted at the treasury.

With this disposition of the forces, orders were given Lieut. Commander Lewis Clark, the senior executive, to communicate by signal to the ships, should occasion for it arise during the night.

Commander Skerrett and myself were about in various parts of the town until 11 o'clock p. m., at which hour everything was quiet, and we came off to our respective ships.

About midnight three pistol-shots and a few stones were fired into the court-house grounds by some persons, who immediately took to their heels and ran away, and nothing more was heard of them. No other incident occurred during the night.

The company at the court-house cleared up the grounds and the interior of the building early the next morning, and the assembly met at 10 o'clock a. m.

The hall presented a sorry appearance, every article of furniture being smashed or badly damaged, except the clock and the pictures of the former kings, hanging on the walls, and the floor was spotted with blood.

The king-elect signified by letter his acceptance to the throne, and notified the assembly that he would be prepared to take the oath of office at Kinan Hale the chamberlain's residence, near the palace, at half-past eleven o'clock a. m.

The assembly then adjourned, and at the appointed hour the nobles, representatives, cabinet officers, diplomatic and consular corps, naval officers, and some few Hawaiian subjects and others, assembled in the grounds of Kinan Hale, and a few minutes before noon the king-elect advanced to the front of the veranda, and, after making a short address



to the nobles and representatives, took the oath and was proclaimed King.

His Majesty then received the cheers and congratulations of the assemblage, and this ship and Her Majesty's steamship Tenedos united with the battery on Punch-Bowl Hill in firing a national salute.

Some apprehension of disturbance was still felt, and the government asked the further protection of the forces of the United States and Great Britain until the public mind had become more assured.

At noon on the day following the King prorogued the assembly in person, on which occasion the battalion from the Tuscarora and Portsmouth and the company from Her Majesty's steamship Tenedos received him with presented arms at the door of the court-house, and this ship and the Tenedos again saluted the flag of Hawaii.

On the 16th instant, at the request of the government, the court-house was evacuated and one-half the force on shore withdrawn to their respective ships. Headquarters of our force remaining on shore were established at the armory, with Lieut. George A. Baldy in command.

A new cabinet went into office on the 18th instant, and the day following the minister of foreign affairs addressed our minister resident as follows, viz: "That such arrangements have now been made for the preservation of order in this city as will allow of the withdrawal at any time after daylight to-morrow morning of the forces which were landed from the United States ships Tuscarora and Portsmouth on the 12th instant, and which have rendered such invaluable services to His Majesty's government."

The minister resident seconded this request, and the entire force was promptly withdrawn in accordance therewith.

Commander Skerrett and myself acted together throughout this affair, and I trust our action will be acceptable to the Department.

Lieut. Commander Lewis Clark, the senior officer present with the battalion, and commanding the force from the Portsmouth, and Lieut. Commander Theo. F. Jewell, commanding the detachment from this ship, performed their duties in a very zealous, judicious, and creditable manner, in which they had the hearty support of Lieut. George A. Norris, Ensign M. D. Hyde, First Asst. Engineer J. H. Harmon, and Midshipman W. H. H. Southerland, of this ship, and Lieut. E. K. Moore, Ensigns J. W. Dauenhower, C. P. Rees, F. H. Crosby, L. P. Jonett, and Asst. Surg. T. H. Streets, of the Portsmouth.

Chief Engineer L. J. Allen and Asst. Surg. J. L. Neilson accompanied the battalion the first day, and during the continued occupation Lieuts. George A. Baldy and Webster Doty, and Midshipmen M. A. Shufeldt and T. E. D. W. Veeder, all from this ship, were on duty at the armory at various times.

The general conduct of the blue-jackets and marines was admirable, and warmly commended by the authorities and citizens of the town.

Special mention has been made to me by some of the authorities of the fine soldierly bearing of Ordnance Sergeant Theo. Hoff, of this ship, which fact I am glad to note in this dispatch.

Although it is not within my province to criticise the officers of other branches of the Government, I cannot refrain from expressing my admiration of the able, effective, and dignified course pursued by our minister resident, Mr. Peirce, in the crisis just passed through.

In perfect accord with the government and his colleagues, zealous for the rights and interests of his countrymen, and thoroughly informed upon the affairs of the kingdom and the character of its people, his



great influence was constantly and effectively exerted, and his good offices seen and felt everywhere.

I respectfully append a dispatch from our minister resident, forwarding a copy of a resolution passed by the legislative assembly, thanking Mr. Peirce and his colleagues and the officers and crews of the men-of-war for their assistance in the restoration and maintenance of order in the kingdom; also, a resolution of thanks from the chamber of commerce and extracts from the press, which will perhaps inform the Department of some details and matters inadvertently omitted or not incorporated in this report.

Very respectfully, your obedient servant,

GEO. E. BELKNAP,

*Commander, Commanding United States Steamship Tuscarora,  
and Senior Officer Present.*

Hon. GEO. M. ROBESON,

*Secretary of the Navy, Washington, D. C.*

LEGATION OF THE UNITED STATES OF AMERICA,

*Honolulu, February 16, 1874.*

SIR: I herewith inclose a copy of a resolve, this day received, passed unanimously, on the 14th instant, by the legislative assembly, tendering its sincere thanks to the representatives of foreign powers, and to the officers and crews of the war-vessels in port, for their generous assistance in preserving the peace and order of the kingdom on the 12th day of February, 1874.

And it is with feelings of great pleasure and satisfaction that I seize this opportunity to present to you and to Commander Skerrett, commanding United States ship Portsmouth, my official and personal thanks for your cordial, judicious, and efficient support rendered in carrying out the views and requests of this legation during the late crisis through which this country has just passed, the details of which you have personal knowledge, and it is unnecessary to mention them.

I was eye-witness of the riot created by the friends of Queen Emma, the disappointed candidate for the Hawaiian throne, and of its instant suppression on the arrival of yourself, officers, and men upon the ground, and which occurred some time previous to the arrival of the armed force landed from the British corvette Tenedos.

Throughout the whole affair I beheld with pride and delight the admirable conduct of yourself and Commander Skerrett and the forces under your respective commands, and the judicious and humane course pursued for suppression of the riot without resorting to unnecessary violence toward individual offenders.

I shall report the facts to the Secretary of State, with the hope that the Secretary of the Navy, on learning them, will properly commend the services rendered.

You and Commander Skerrett were present when Mr. Ballin, French commissioner, and Mr. Henck, consul for the Empire of Prussia, as a committee appointed by the consular corps of Honolulu, tendered their thanks to me and yourselves for the armed intervention rendered by the United States vessels in port, for suppression of disorder and maintenance of peace and order on the late occasion.

With great respect, your obedient servant,

HENRY A. PEIRCE,

*United States Minister Resident.*

Commander GEO. E. BELKNAP,

*Commanding United States Ship Tuscarora, and Senior*

*United States Naval Officer present, off Honolulu.*

RESOLUTION.

*Resolved*, That this assembly hereby tenders its sincere thanks to the representatives of foreign powers, and to the officers and crews of the war-vessels now in this port, for their generous assistance in preserving the peace and order of this kingdom on the 12th day of February, 1874.

LEGISLATIVE ASSEMBLY,  
Honolulu, February 14, 1874.

I hereby certify that the foregoing resolution was unanimously adopted by the legislative assembly of the Hawaiian Islands, this 14th day of February, A. D. 1874.

R. H. STANLEY,  
Secretary Legislative Assembly.

Vessels of war in port of Honolulu February 12, 1874: United States steamer Tuscarora, 3d rate, George E. Belknap, commander; United States steamer Portsmouth, 2d rate, sailing-vessel on surveying duty, J. S. Skerrett, commander; Her Britannic Majesty's sloop Tenedos, Commander Ray.

ROOMS OF THE CHAMBER OF COMMERCE,  
Honolulu, February 19, 1874.

SIR: We, a committee of the chamber of commerce of this city, have the honor to present to your excellency, herewith inclosed, a copy, signed by all the members at present in Honolulu, of resolutions which express in a very moderate degree their sense of obligation to yourself and others therein referred to.

We have, at the same time, to request that you will be kind enough to communicate to Captains Belknap and Skerrett the tenor of this note and its inclosure.

We are, your excellency's most obedient servants,

CHAS. R. BISHOP,  
GODFREY RHODES.  
F. A. SCHAEFER.

His Excellency HENRY A. PEIRCE,  
Minister Resident of the United States.

*Resolved*, That the Chamber of Commerce of Honolulu express to his excellency Henry A. Peirce, minister resident of the United States of America, and James Hay Wodehouse, esq., Her Britannic Majesty's commissioner and consul-general, its sense of obligation for the promptness with which they responded to the request of the authorities of the kingdom for aid from the ships of war of their respective countries, now in our port, to suppress the riot which broke out on the 12th instant, on the election of the now reigning sovereign by the legislative assembly; for the prudence and firmness they displayed in their endeavors to protect life and property, and for the singleness of purpose they exhibited in refraining from any interference in the politics of the country.

*Resolved*, That this chamber respectfully request his excellency the minister resident of the United States to convey to Captain Belknap, of the United States ship Tuscarora, and Captain Skerrett, of the United States ship Portsmouth, and Her Britannic Majesty's commissioner to express to Captain Ray, of Her Majesty's ship Tenedos, its thanks for the invaluable services rendered by the officers and men of those ships in the restoration of peace and order, and the re-establishment of the supremacy of the laws, all of which has been accomplished with perfect efficiency and in a most conciliatory manner.

Charles R. Bishop,  
F. A. Shaefer,  
A. T. Cleghorn,  
A. W. Peirce,  
J. C. Pfluger,  
Jno. S. Walker,  
J. T. Waterhouse,  
F. S. Pratt,  
Henry May,

Samuel G. Wilder,  
Theodore C. Heuck.  
Alexander J. Cartwright,  
S. N. Castle.  
Godfrey Rhodes,  
Theodore H. Davies,  
M. Lomisson,  
B. F. Bolles,  
H. M. Whitney,

P. C. Jones, jr.,  
Afong & Achuck,  
Edwin O. Hall,  
B. F. Dillingham,  
J. G. Dickson,  
J. E. Banning,  
George C. McLean.

## OPENING OF THE LEGISLATURE.

SPECIAL SESSION, FEBRUARY 12, 1874.

Fully two hours before the time set for opening the assembly, (12 o'clock noon.) the people began to assemble in the court-house grounds, and at a quarter to 12 there

were probably a thousand men, women, and children in the neighborhood. At that moment a procession of the Queen's adherents marched down the street, numbering perhaps 200 persons, with drums beating, who gave and took a considerable amount of cheering. The place reserved for spectators in the hall will probably hold 300 persons, and it was immediately filled to overflowing on the opening of the doors.

The desks of the nobles and representatives were arranged in a semicircle around the hall, and members generally were in their seats before the hour. On the right of the president's dais were seats reserved for foreign diplomatic and consular representatives, and among those present we noticed the American minister resident, the British commissioner and consul-general, the French consul, and consuls of other nationalities.

At 12 o'clock precisely Mr. R. H. Stanley called the assembly to order, and after prayer by the Hon. Mr. Lonoaea, his excellency P. Nahaolelua was called to the chair *pro tempore*.

The roll of nobles and representatives was then called, to which all responded except Hon. C. G. Hopkins (absent from the country.)

Hon. Mr. Kankaha moved to go into nomination for permanent officers.

Before proceeding to an election of officers, Hon. Mr. Aholo raised the question, as to whether the representatives of 1872 or those of 1874 were the proper ones to elect a sovereign. He doubted also whether the members now returned would all be found, on examination, to be entitled to sit. He moved the reference of this question to the judges of the supreme court.

Hon. Mr. Wilder rose to a point of order. The house was not yet organized, and could not entertain any matters of business outside of choosing officers.

Supported by Hon. Mr. Kankaha, who said he had long since settled this question in his own mind, he hoped there would be no attempt to obstruct the business of the nation like that put forth by the member for Lahaina. Mr. Kankaha urged that the house must proceed to organize before discussing any questions. Hon. Mr. Kaai also ably supported this view. As yet this was only an assemblage of persons, and not the Legislative Assembly. But he thought that credentials of representatives should be first examined and reported on and members sworn, before any business whatever can be done.

The acting president ruled that the election of permanent officers was the only business now in order. The house then proceeded to ballot for officers, with the following result:

President, his excellency P. Nahaolelua; vice-president, Hon. S. K. Kaai; secretary, Mr. R. H. Stanley; interpreter, W. L. Wilcox; sergeant-at-arms, W. C. Parke; chaplain, J. N. Paikuli.

The election of messenger was postponed for the present.

The credentials of the representatives were then placed on the president's table, and referred to a select committee for examination, who, after returning into the house, reported that the credentials of all the representatives, as sent to the minister of the interior, were in due and legal form. Adopted.

On motion of Hon. Mr. Kapihea, Hon. A. S. Hartwell, associate justice of the supreme court, was requested to administer the constitutional oath of office.

Judge Hartwell then proceeded to administer the oath, first to the nobles and then to the representatives, the deputation from each island by itself. The officers were then sworn in.

His excellency C. R. Bishop, minister of foreign affairs, then read the following official statement to the house:

*Mr. President, Nobles, and Representatives:*

His late Majesty Lunalilo was elected as the successor to His late Majesty Kamehameha V, by the Legislative Assembly on the 8th day of January, A. D. one thousand eight hundred and seventy-three.

After a short reign of one year and twenty-five days, his earthly existence terminated at Haimoeipo, his private residence in Honolulu, in the island of Oahu, on the third day of February, A. D. one thousand eight hundred and seventy-four.

His late Majesty Lunalilo left no heirs, nor did he appoint any successor in the mode set forth in the constitution, with the consent of the nobles, or make proclamation thereof during his life.

There having been no such appointment or proclamation, the throne of Hawaii became again vacant, and the cabinet council immediately thereupon considered the provisions of the constitution in such case made and provided, and ordered that a meeting of the Legislative Assembly be holden at the court-house in Honolulu, on Thursday, which will be the twelfth day of February, A. D. 1874, at twelve o'clock at noon. And of this order all members of the Legislative Assembly will take notice and govern themselves accordingly.

There have been filed with your president a certificate of the decease of His late

Majesty, and a certified copy of the records of the cabinet council when the above order was made.

By virtue of this order you have been convened to elect by ballot some native alii of this kingdom as successor to the throne.

May the blessings of Heaven rest upon you, and may the God of all wisdom guide your deliberations.

CHARLES R. BISHOP,  
*Minister of Foreign Affairs.*  
 EDWIN O. HALL,  
*Minister of the Interior.*  
 ROBERT STIRLING,  
*Minister of Finance.*  
 A. FRANCIS JUDD,  
*Attorney-Gen. of the Kingdom.*

Hon. Mr. Kuikahi moved that the House do now proceed to ballot for a King of these islands. Carried.

Hon. Mr. Wilder on the part of the nobles and Hon. Mr. Moehonua were chosen as tellers.

The secretary then proceeded to call the roll of the house, beginning with the name of His Highness Chas. Kanaina. As each member's name was called he advanced to the ballot-box on the secretary's table and deposited his ballot.

The tellers, having counted the ballots, announced the result as follows:

Hon. D. Kalakaua.....	39 votes
Queen Emma.....	6 "

His excellency the president then declared the Hon. David Kalakaua chosen as King of the Hawaiian Islands, in accordance with the provisions of the constitution.

The following members were appointed a committee to wait upon the King-elect and inform him of the result:

Hon. Messrs. Kaukaha, Moehonua, Aholo, J. H. Martin, Kaine.

On motion, the secretary was instructed to prepare the necessary certificate of this election, and to cause a copy of the same to be published in the newspapers of the country.

Adjourned till to-morrow at 10 o'clock.

SECOND DAY, *February 13, 1874.*

The house was called to order by his excellency the president, at a few minutes past 10 a. m. There being no quorum present, the sergeant-at-arms was ordered to procure the attendance of absent members. The members having come in,

Prayer was offered by the Rev. Mr. Paikuli, chaplain of the house.

Minutes read and approved.

Mr. David Eldridge was elected messenger.

Mr. Kaukaha, from the special committee appointed to wait on the King-elect, reported the following communication from His Majesty the King:

IOLANI PALACE, *Honolulu, February 12, 1874.*

To His Excellency P. NAHAOLELUA,

*President of the Legislative Assembly of the Hawaiian Islands:*

SIR: I have received at the hands of your committee the certificate of my election to-day by the Legislative Assembly as successor to the throne of the Hawaiian Islands.

I wish to express to the Legislative Assembly, through you, my thanks for this highest mark of their confidence, and to say that I accept the royal trust.

KALAKAUA.

The message was received and ordered to be placed on the minutes.

His excellency the minister of foreign relations stated that His Majesty authorized him to say that he would be pleased to take the oath of office to-day, at half past eleven o'clock, at Kinau Hale. The members of the Legislative Assembly were invited to be present, and foreign representatives. His excellency regretted that the size of the building rendered it impossible to invite the public.

The house thereupon adjourned to to-morrow at 10 a. m.

THIRD DAY, *February 14, 1874.*

The house met at 10 a. m., his excellency P. Nahaolelua, the president, in the chair. Prayer by the chaplain. Minutes read and approved.

Hon. Mr. Wilder, under a suspension of the rules, introduced a bill appropriating \$10,000 to defray the expenses of the special session of 1874.

On motion of his excellency the attorney-general, the rules were again suspended, the bill passed through its several readings, and was finally passed, and a select committee, consisting of the Hon. Messrs. Wilder, Aholo, and J. H. Martin, appointed to lay the same before His Majesty.

His excellency the minister of the interior stated that His Majesty had communicated his intention to prorogue the assembly in person to-day at 12 o'clock noon.

On motion of the Hon. Mr. Kaukaha, a committee, consisting of his excellency J. O. Dominis, Hons. J. P. Parker and Kakina, was appointed to prepare and present resolutions of condolence to His Highness Charles Kanaina, father of the late King, on the death of His Majesty Lunalilo.

The following communication from the foreign residents of Honolulu was laid before the house :

*To the President, Vice-president, Nobles, and Representatives of the Hawaiian Kingdom, in Legislative Council assembled :*

We, the undersigned, citizens and foreign residents of this capital, beg most respectfully to present to your honorable body the expression of our most heartfelt sympathy and commiseration with you, and more especially with those of your number who suffered from the attack of a lawless mob on the day of the election of the sovereign to the Hawaiian throne.

We are universally anxious to tender you this expression of our extreme regret at the occurrence of so serious an outrage committed upon you while discharging the duties of the highest trust the people of this nation could confer, and we trust that your honorable body will be pleased to accept this as an assurance of our heartfelt sympathy with you.

Honolulu, 13th February, 1874.

E. A. Schaefer,  
J. C. Glade,  
J. C. Pfuger,  
J. G. Dickson,  
Jno. S. Smithies,  
J. W. Robertson,  
S. M. Damon,  
C. S. Bartow,  
John Ritson,  
Theod. C. Heuck,  
W. L. Green,  
Samuel C. Damon,  
S. F. Chillingworth,  
W. G. Irwin,  
M. Louisson,  
H. Macfarlane,  
W. A. Markham,  
H. B. Stillman,  
C. P. Ward,  
Jno. H. Paty,  
Chas. S. Heustice,  
J. D. Brewer,  
Wm. Johnson,  
O. G. Clifford,  
A. W. Peirce,  
D. P. Peterson,  
J. McColgan,  
M. Green,  
Thos. Cummins.  
Geo. H. Luce,  
Em. Fenard,  
Wm. S. Luce,  
A. P. Brickwood,  
R. B. Davidson,  
R. Meyer,

A. J. Cartwright,  
Wm. W. Hall,  
Frank Brown,  
E. Krull,  
H. M. Whitney,  
W. Babcock,  
Jas. L. Lewis,  
Ira Richardson,  
Chas. A. Castle,  
E. P. Adams,  
P. C. Jones, jr.,  
N. Hymau,  
John S. Walker,  
H. I. Nolte,  
E. Furstenan,  
B. F. Bolles.  
G. W. Houghtailing,  
Theo. H. Davis,  
G. W. Macfarlane,  
Thos. R. Walker,  
Godfrey Rhodes,  
Fr. Banning,  
Th. Opfergelt,  
W. Martens,  
J. D. Wicke,  
H. Brautlecht,  
Julius Hoting,  
Jas. S. Lemon,  
Geo. H. Ross,  
W. R. Buchanan,  
H. L. Sheldon,  
J. H. Black,  
Alex. Campbell,  
H. Schmidt,  
R. Riemenschneider.



On motion of Hon. Mr. Kaukaha, a select committee was appointed to prepare a reply expressive of the appreciation of the sympathy thus tendered by the residents of Honolulu, and that this correspondence be published in the newspapers of this city.

The following was the response sent by the chairman of the select committee :

LEGISLATIVE ASSEMBLY,  
*Honolulu, February 14, 1874.*

GENTLEMEN: In behalf of the Legislative Assembly of the kingdom, we have the honor to acknowledge the receipt of the memorial presented on the 13th instant, by the citizens and foreign residents of Honolulu, tendering the expression of their sincere regret at the occurrence of so serious an outrage on the assembly, while in the discharge



of the high trust to them committed; and most candidly thank you one and all for your assurance of heartfelt sympathy so kindly expressed to us as a body, and more especially for the cordial manifestations of beneficence for those of our number who suffered upon that occasion.

Very respectfully submitted.

JNO. O. DOMINIS.

*Chairman of Committee.*

To Messrs. J. C. GLADE, F. A. SCHAEFER, A. J. CARTWRIGHT, and others.

The following resolution was then adopted, and ordered to be spread on the minutes:

*Resolved*, That this assembly hereby tenders its sincere thanks to the representatives of foreign powers and to the officers and crews of the war-vessels now in port, for their generous assistance in preserving the peace and order of this kingdom on the 12th day of February, 1874.

His excellency the attorney-general said, that as there was nothing occupying the attention of the house, he wished to avail himself of the opportunity to make some remarks in regard to the disgraceful riot of the 12th instant. Undoubtedly his colleagues and himself would be blamed for not having foreseen that deeds of violence would be committed, and for not having provided that an armed force be present to prevent their occurrence during the election of a King. This had been suggested and discussed. The cabinet thought that, as some of their number had resided here for twenty-five or thirty years, and one (the speaker) had been born here, they were acquainted with the Hawaiian race, and that they were safe in trusting the people. The behavior of the people during the interregnum preceding the election of his late Majesty, Lunailo, and during other crises through which the people had passed, had led the cabinet to believe that though there would be great excitement and loud words on the occasion, yet that would be all. That it was better to trust in the law-abiding character which this people had acquired during long years, than to have the presence of an armed force during the election. A display of soldiery would be readily misconstrued to be either an attempt at coercion, or an appearance of fear, when none really existed. In this view, however, the cabinet were mistaken, as the murderous assaults on the honorable representatives and malicious destruction of property proved. A force of forty policemen had been provided, also a committee of one hundred and seven of our best Hawaiians had been enrolled who agreed to remain among the crowd and preserve order. This was deemed by all who knew of the arrangement to be amply sufficient. All present know of how little avail their efforts were.

Hon. Mr. Kaukaha regretted that his excellency the attorney-general had seen fit on behalf of the cabinet to make this explanation. After the experience of last year, when the populace had openly declared that if the legislature failed to elect the man of their choice, blood would be shed, and the experience of the "war at the barracks," the ministers ought to have been prepared and to have taken better precautions against a popular outbreak.

Hon. Mr. Kaukaha then offered the following:

*Resolved*, That the ministers are hereby authorized and directed to provide medical attendance from the foreign and native physicians of this city, and also nurses for the members of this house who have suffered injury; and to pay for the same out of the public treasury; and that the minister of finance render an account of such expenditure at the next session of the Legislative Assembly.

The house then adjourned to 10 minutes before 12 o'clock.

At 12 o'clock His Majesty, accompanied with his aids, left the palace, under a salute from Punchbowl battery, Her Britannic Majesty's ship Tenedos and the United States ship Tinscarora, and was escorted by the band and cavalry. On his arrival at the court-house the United States and British marines were drawn up in front of the building and received the King with the usual honors. He rode down in the state carriage, accompanied by his brother, Prince William Leleiohoku, and brother-in-law, Hon. A. S. Cleghorn.

When His Majesty entered the legislative hall the audience rose while he proceeded to the president's desk, and remained standing while he was present. Prayer was offered by the chaplain of the assembly, after which the King read the address, in Hawaiian and English, proroguing the assembly, printed in another column.

#### BY AUTHORITY.

*To all to whom these presents shall come, greeting:*

Know ye, that the Legislative Assembly of the Hawaiian Islands has on this twelfth day of February, A. D. 1874, elected His Royal Highness David Kalakaua, King of the Hawaiian Islands.

By order of the Legislative Assembly.

R. H. STANLEY,  
*Secretary of the Legislative Assembly.*

HONOLULU, February 12, 1874.



## PROCLAMATION.

We, Kalakaua, by the grace of God King of the Hawaiian Islands, agreeably to article twenty-second of the constitution of our kingdom, have this day appointed and do hereby proclaim and make known that falling an heir of our body, our beloved subject and brother, His Royal Highness Prince William Pitt Leleiohoku, is to be our successor on the throne as King after it shall have pleased God to call us hence.

Done at Iolani Palace in Honolulu, this fourteenth day of February, in the year of our Lord eighteen hundred and seventy-four.

By the King.

[L. S.]

EDWIN O. HALL,  
*Minister of the Interior.*

KALAKAUA R.

## KALAKAUA R.

I, Kalakaua, King of the Hawaiian Islands.

*To all to whom these presents may come, greeting :*

By virtue of the authority of the 35th article of the constitution of the kingdom, do hereby ordain and decree that my brother, William Pitt Leleiohoku, is hereby invested with the style and title of His Royal Highness Prince Leleiohoku.

It is further my order and command that from and after the date of these presents, he shall take precedence of all other persons whatsoever, on all state occasions.

In testimony whereof we have caused these letters to be made patent and the seal of our kingdom to be hereunto affixed.

Given under our hands at Iolani Palace in the city of Honolulu, this fourteenth day of February, in the year of our Lord one thousand eight hundred and seventy-four.

By the King.

[GREAT SEAL.]

CHAS. R. BISHOP,  
*Minister of Foreign Affairs.*

KALAKAUA R.

It has pleased His Majesty the King to appoint as justices of the supreme court the following-named gentlemen :

Honorable Chas. Coffin Harris, first associate justice ; vice A. S. Hartwell, resigned.

Honorable A. Francis Judd, second associate justice ; vice H. A. Widemann, resigned.

JNO. O. DOMINIS,

*His Majesty's Private Secretary.*

IOLANI PALACE, *February 17, 1874.*

It has pleased His Majesty the King to appoint the following-named gentlemen as members of his cabinet :

His excellency Paul Nahaolelua, minister of finance.

William L. Green, minister of foreign affairs.

Honorable Hermann A. Widemann, minister of interior.

Honorable Alfred S. Hartwell, attorney-general.

JNO. O. DOMINIS,

*His Majesty's Private Secretary.*

IOLANI PALACE, *February 17, 1874.*

## PROCLAMATION.

SATURDAY, *February 14, 1874.*

*To all whom these presents shall come, greeting :*

Know ye, that the Legislative Assembly of the Hawaiian Islands has, on the 12th day of February, A. D. 1874, elected His Royal Highness David Kalakaua, King of the Hawaiian Islands.

By order of the Legislative Assembly.

R. H. STANLEY,

*Secretary of the Legislative Assembly.*

HONOLULU, *February 12, 1874.*

At 12 o'clock noon, yesterday, February 13, His Majesty the King took the oath of office, at Kinau Hall, adjoining the palace, his honor Judge Hartwell, vice-chancellor of the kingdom, administering the oath as prescribed by the constitution. There were present the ministers of the late King, members of the privy council and of the Legislative Assembly, and foreign diplomatic and consular agents.

Before taking the oath of office His Majesty addressed a few words to those assembled, in which he was pleased to say that he had intended to have deferred this important act until some more convenient opportunity and at some appropriate public place, but that under existing circumstances he had decided not to defer it.

After the oath had been administered, the Rev. H. H. Parkèr, at His Majesty's request, offered an eloquent prayer.

Immediately on the conclusion of the ceremony, a royal salute was fired from the battery on Punchbowl, and responded to by the United States steamer Tuscarora and Her Britannic Majesty's steamer Tenedos.

A few minutes past twelve, his excellency John O. Dominis, governor of Oahu, accompanied by Maj. E. H. Boyd, of the late King's staff, and escorted by the Hawaiian cavalry, proceeded through the principal streets of the city, and made proclamation of His Majesty's accession in the following words:

"In the name of the constitution, I proclaim Kalakaua, King of Hawaiian Islands. It is the pleasure of His Majesty that his late Majesty's ministers of state discharge their several duties until further advised. It is the sincere desire of His Majesty that his people maintain peace. God save the King."

#### ACTION OF THE CONSULAR CORPS.

At a meeting of the consular corps, held on Saturday last, at the office of Mr. Schaefer, the following resolution was unanimously adopted upon the suggestion of one of the members:

*"Resolved,* That the senior of the consular body, Mr. Heuck, accompanied by Mons. Ballieu, who joins to his functions of commissioner those of consul for France, call upon the representatives of the United States and Great Britain, and convey to them the sincere thanks of the foreign consuls for the promptness and impartiality with which they, through their ships of war in port, assisted the local authorities in putting an end to the disturbance of last Thursday, without in any way interfering in Hawaiian politics. By so doing not only lives and property of American and British subjects together with Hawaiian were saved, but such protection was likewise given to the subjects of all other nations represented here by the members of the consular corps, and gratefully acknowledging this fact, the fairness and readiness of those who extended such protection is highly commendable. The gallant and moderate conduct of the captains, officers, and men of the Tuscarora, Tenedos, and Portsmouth was a pleasing fact, and the appreciating thanks of the meeting to Captains Belknap, Ray, and Skerrett, and those under their command, to be communicated to them through their respective representatives here."

The committee immediately called upon Mr. Peirce and Mr. Wodehouse and delivered the foregoing message, whereupon these gentlemen expressed their fullest appreciation of this act on the part of the consular corps, renewing the assurance that at all times the interests of the subjects of all nations together with those of this kingdom would be gladly and readily guarded by them.

#### RIOT OF THE QUEENITES.

*The court-house in the hands of a mob; they demand a reversion of the role of the Assembly, and that Emma be made Queen. Destruction of property and murderous attack on representatives. Intervention by an armed force from American and British ships of war.*

When the announcement was made by the president of the Assembly on Thursday (at a few minutes before 3 p. m.) that Prince David Kalakaua was elected King of the Hawaiian Islands, several attempts were made in the audience to cheer, but they were promptly suppressed by the police. Some cheering was heard from the crowd outside, but it was mingled with yells and cries of rage from the mob of Queenites. Orators, mostly of the "sanscullores" class, were busy here and there, exciting the passions of their hearers against the representatives, for having, as they declared, voted against the wishes of the people in making Kalakaua King.

Meantime the committee appointed to wait on the prince issued from the court-house and were about entering a carriage, when an attack was made upon them by

the mob. They were severely hustled, and their clothes torn, and were compelled to beat a hasty retreat, re-entering the court-house from the rear entrance. In the rush at this moment, a foreigner, named John Foley, who endeavored to rescue Major Moehonua (against whom the mob appeared to be particularly spiteful) was struck by some one in the crowd, whereupon he squared himself and struck right and left, but only for a moment. A blow with a stick from behind felled him to the ground and he was jumped upon and would have been killed in all probability, but that Major Wodehouse, the British commissioner, who happened to be near, forced his way through the crowd and stood over the man until he was carried away, badly but not seriously hurt.

The committee having got back inside the court-house, the mob now surged around to the front entrance, where with savage yells they demanded that the representatives appear. Whenever one of these was seen at an upper window, fists and sticks would be shaken at him, and the shout went up, "Look out for yourself!" while the eyes of the upturned faces glared with demoniacal fury. Repeated attempts were made by the marshal and deputy, and by well-known foreigners to persuade the mob to disperse peaceably, but these attempts only seemed to still further excite their unreasoning rage. They declared that they had nothing against any foreigner, but only wanted to get hold of the native representatives, to wreak on them their vengeance for having voted against Queen Emma. The situation of the members was now getting precarious, shut up unarmed in a building, the doors of which would yield to a moderate assault, with a howling mob without, apparently thirsting for their lives.

The cry was now raised by the mob, (about 4 o'clock,) "Break in the back doors"—the front being guarded by the police. (It is proper to state just here, that throughout the riot the native police were of little or no use.) One or two rushes, a piece of lumber used as a battering ram, and the folding-doors yielded and the mob poured in. The members were now mostly all in the upper portion of the building, with several of the ministers, judges, and other officials. For a time, after gaining an entrance, the mob devoted their attention to the destruction of property, and appeared to forget the representatives, while they proceeded to smash furniture, tear up papers and mutilate books, in the offices of the attorney-general, of Judge Hartwell, Judge Widemann, the police magistrate, and the police court room. Many valuable private and some public documents were ruthlessly destroyed, of a nature that can never be replaced. Fortunately the records of the supreme court, in the clerk's office up-stairs, were not reached by the vandals. All the windows and most of the window-sash of the court-house, both above and below, were broken with coral stones thrown by the mob or with clubs.

And now commenced the attack on the representatives, as they were endeavoring to escape from the building. Clubs, improvised from table and chair legs, were freely used, and that murder outright was not accomplished can only be explained by the number of the assailants all striking blindly at once. A few foreigners, too, were active and courageous in endeavoring to rescue and save the members. As it was, four were seriously injured by blows about the head, viz: Messrs. Kipi and Haupu, of Hilo; Nahinn, of South Kona; and Moehonua, of Honolulu. The following were badly, but not seriously, cut and bruised: Messrs. Lonoaea and Birch, of Wailuku; Kaine and Kupihea, of Molokai; Kapule, of Makawao; Koakaun, of Koloa, Kauai; and Kakani, of Hana, Mani. We have heard of but one person outside the representatives who was attacked and beaten, J. Koi Unauna, a known strong partisan of Kalakaua. Hon. W. T. Martin and his son Hon. J. H. Martin, both members of the assembly, barely escaped from the mob, through the courageous assistance of foreign friends. A notable circumstance throughout the whole of the riot was that with the one exception at the beginning, no foreigner was molested, though if the rioters had not been dispersed by a show of an armed force just at the time when they were, indiscriminate violence, robbery, and arson would probably have resulted throughout the city.

Immediately after the attack on the committee, as described above, some of the members suggested that assistance be sent for from the ships of war in the harbor. But it was not until further violence had been perpetrated by the mob, and they had plainly declared their intention of having the lives of the members, that the authorities consented to seek for foreign assistance. A request from the King-elect, and from their excellencies the minister of foreign affairs and the governor of Oahu, was made to the representatives of Great Britain and the United States for the landing of a sufficient force for the protection of life and property. In a few minutes thereafter a squad of marines and sailors from the United States steamers Tuscarora and Portsmouth arrived, and shortly after their arrival a similar squad from Her Britannic Majesty's steamer Tenedos landed and marched up to the court-house and took possession of the building and grounds. Some of the rioters, who were actively engaged in the work of destruction in the building, no sooner caught sight of the armed force than they dropped their clubs and mingled with the crowd, which soon after gradually dispersed. A few were arrested on the spot, but the majority marched off in triumph, shouting and hurrahing for the Queen. To her residence they repaired in a crowd, and saluted her with exultant cheers, while some of her partisan leaders made incendiary speeches. In this connection it should be stated, that while the riot was at its height, a member

of the house of nobles drove to the Queen's residence, and begged of her to go down to the court-house, and use her personal influence in dispersing the mob and preventing the spilling of blood, which he represented as imminent. The Queen is stated to have treated this message with indifference, as no concern of hers. Subsequently she promised another gentleman that she would go, but did not go. She sent, however, a note to be read to the rioters, which was addressed to "my people," and was in substance to this effect: "That if they could not obtain their desires now, perhaps they had better wait until the morrow, when a new election for sovereign could be had."

The debris of the mob were in full blast at Her Majesty's residence, speech-making and boasting, after sundown, when a file of the Tenedos marines marched into the yard and dispersed them, the police making one or two arrests.

During Thursday night the foreign forces kept possession of the court-house and mounted guard at the palace, at the residence of the governor of Oahu, and at the barracks, prison, armory, and the government offices, while a detachment of the Honolulu Rifles was stationed at the powder-magazine. During the night three shots are reported to have been fired at the guard at the court-house, from behind fences in the neighborhood. These were supposed to have been from some of the rioters, who were prowling about in the darkness of the night. A man was seen skulking along by the corner of Wilder & Co.'s lumber-office, but on being challenged by the sentry, he disappeared. A few minutes later, the first shot was fired from the lumber-yard, followed by two others from different directions. There was, however, no further interruption to the quiet of the night, and Honolulu rested under the protection of the United States and Great Britain.

---

### THE PRAYER FOR THE ROYAL FAMILY.

*To the Editor of the Hawaiian Gazette :*

SIR: Objection having been raised in certain quarters to the name of Queen Emma being placed before that of Queen Kapiolani in the prayer for the royal family in the cathedral of the Anglican Church, I trust you will allow me space to state that the order observed is that which would obtain under like circumstances in the court of Great Britain. Any one who will consult a prayer-book published in the early part of the reign of her present Majesty, will find that the queen dowager then took precedence of the consort of the sovereign, and the consort of the sovereign took precedence of the heir apparent.

I am yours, faithfully,

ALFRED WILLIS, D. D.,  
*Bishop of the Anglican Church in Hawaii.*

IOLANI COLLEGE, February 16, 1874.

---

The Legislative Assembly will be prorogued at the court-house to-day at 12 o'clock noon, by royal commission.

The entire community of these islands have been laid under deep and lasting obligations to Captains Skerrett, Belknap, and Ray of the American and British war-vessels in port, and to their officers and men, for the prompt manner in which they rendered material aid in suppressing the riot, and the careful and considerate manner in which they discharged a peculiar duty.

---

### THE INAUGURATION.

It had been the purpose of His Majesty, after his election, to have the inauguration ceremony performed, as has been the custom, in the Stone Church, and in the most public manner possible. But owing to the unexpected disturbances which took place on the election day, and the strong advice of his counselors that the oath of office should be taken as soon as possible, so as to remove all causes that prevented the restoration of quiet, he waived his wishes, and appointed 11½ a. m. of Friday as the hour.

Kinau Hale, where the ceremony was performed, is near by the palace, and the most convenient place obtainable. At the above hour, the cabinet and other officers of the late King, the foreign diplomatic and consular representatives, the officers of the three war-ships in port, the nobles and representatives, together with native and foreign citizens to the number of two or three hundred, assembled there. A few minutes before 12 m. the King appeared on the veranda, and addressed the audience as follows:

"NOBLES AND REPRESENTATIVES: You have been called to assemble at this time with the representatives of foreign governments to witness my assuming the sacred trust of

the constitution. I am sorry that, on account of the present disturbance, I cannot, as I had designed, give my people a new constitution, as a blessing to them, and to establish the independence of our kingdom, and the throne of Hawaii nei; but this is a time of commotion, and my one great object is to strengthen the foundation of my power as guardian of the people. I am conscious that it is a high responsibility, and one that demands great caution in the possessor, but at this time, as the disturbance is not over, and as I see the consequences of the riot upon the representatives in my presence, I ask that you will aid me in assuming this sacred trust."

His honor Judge Hartwell, vice-chancellor of the kingdom, then administered in Hawaiian and English the following oath, His Majesty repeating it, sentence by sentence, after Justice Hartwell, and both resting their hands on the Holy Bible, held by His Royal Highness Prince Leleiohoku:

"I, Kalakaua, solemnly swear, in the presence of Almighty God, to maintain the constitution of the kingdom whole and inviolate, and to govern in conformity therewith."

Rev. H. H. Parker was then called on by His Majesty to invoke the Divine blessing, and offered a fervent prayer very appropriate to the occasion.

The audience then gave three cheers for their sovereign, which the crowd in the streets took up and repeated, while the guns on Punchbowl battery boomed forth the first royal salute to King Kalakaua and his royal standard, which was responded to by Her Britannic Majesty's ship Tenedos and United States ship Tuscarora in the harbor.

The diplomatic and consular representatives and other officers, as well as the people present, approached and congratulated His Majesty, after which the audience dispersed.

### KING KALAKAUA.

Prince David Kalakaua, who was chosen on the 12th instant almost unanimously by the Legislative Assembly to be King, was born in this city on the 16th of November, 1836, and is therefore in his thirty-eighth year. He is the eldest son of the late C. Kapaukea and Keohokalole, who were connected with various branches of the high chiefs, descended from the ancient sovereigns. They left two sons, David and William, and two daughters, Hon. Mrs. Governor Dominis and Hon. Mrs. A. S. Cleghorn. The two eldest children, David and Lydia, received their education at the royal school, under the care of Mr. and Mrs. Cooke, and were there at the same time that the late sovereigns Kamehameha IV, Kamehameha V, and Lunalilo attended. Prince David and his brother and sisters enjoyed every advantage which the best schools in this city could afford for obtaining a good education; and how well they improved these advantages those who know them best can attest. They are all as conversant with the English as with their own tongue.

During the past few years Prince David has held a position as clerk to the Interior Department, and has also been secretary of the privy council under both of the last Kings. He has, therefore, had an opportunity to observe and become familiar with the workings of government, as he has with all connected with it. Whatever may have been his former political sentiments, as expressed in legislative debates, the events of the last two years, and particularly of the past few weeks, will serve to show him, as it must every one else, the necessity of adopting a liberal and conservative yet firm policy, which will tend to unite as much as possible all conflicting interests in the kingdom. Never before has a ruler in Hawaii needed so greatly the aid of prudent and wise counselors in his administration, possessing the respect and confidence of the whole people, with the loyal support of his native and foreign subjects. On the sagacity of his choice much of the success of his reign will depend, in inspiring confidence at home and abroad, and in removing whatever causes may tend to create weakness in the administration of the government, or want of harmony among the various classes composing our small population. A misstep now may launch our frail ship of state on a sea of turmoil, while prudence and caution just at this time may secure the independence of Hawaii for many years to come.

King Kalakaua was married some years since to Kapiolani, widow of B. Namakeha, who was brother of Naea, the father of Queen Emma. She is also niece of Keliikahonui, one of the chiefs of Kauai, and was named after Kapiolani, the famous chiefess of Hawaii who broke the Pele Kapu as described by Bingham, p. 255, and who was one of the earliest converts to Christianity. The lady who has thus become elevated to the position of Queen is not only connected with high rank, but is in private life a most estimable woman, who has been, for several years, an unostentatious and exemplary member of St. Andrew's church of this city. In his marriage relations, the example of our new sovereign will commend itself to all who deplore the growing tendency of Hawaiians to set them aside, and will doubtless have a good effect on the people of his kingdom.



## CLOSING OF THE LEGISLATIVE ASSEMBLY.

His Majesty the King having signified his purpose to close the session of the Legislative Assembly at noon on Saturday, that body assembled at their hall a few minutes before the hour named, which was filled to its utmost capacity with spectators. It was a sad spectacle to witness the representatives seated around the half-furnished hall, with heads bandaged and arms resting in slings—a sight that has never before been seen here since the establishment of a constitutional government.

A few minutes before twelve, a salute from Punchbowl announced the departure of the King from the palace. He was accompanied by his staff and the governor with his staff, and the Hawaiian cavalry and rifle companies, and rode to the hall, in his state coach, with his brother, Prince Leleiohoku and the Hon. A. S. Cleghorn. In front of the court-house the marines of Her Britannic Majesty's ship *Tenedos* and the United States ships *Tuscarora* and *Portsmouth* were drawn up, and saluted His Majesty as he passed them.

At quarter past 12 he entered the legislative hall and ascended to the speaker's desk, his brother standing by his side, with several kabilis ranged on either side of the rostrum. Prayer was offered by the chaplain, Rev. Mr. Paikuh, after which His Majesty read, first in Hawaiian and then in English, the following address :

*' Nobles and Representatives :*

"The vacancy of the throne of our kingdom by the demise, on the 3d instant, of our much-lamented predecessor, made it necessary for you to meet in extraordinary session.

"There has been no unnecessary delay either in your coming together or in the discharge of the important duty imposed upon you by the constitution.

"By your free choice I am now King, and I hope, with your aid and that of all my faithful subjects, to make my reign a blessing to my people.

"The present session having been called for a special purpose, which has been accomplished, I have no other business to lay before you now; but the regular biennial session will be convened in April next, as required by the constitution, at which time all matters pertaining to the welfare of our kingdom may be considered.

"Nobles and representatives: I desire again to thank you for your partiality and kindness toward myself; and I pray the Almighty that He will continue to protect and prosper our kingdom.

"I now declare this legislative assembly prorogued."

At the close of the speech His Majesty retired to the chief justice's room, where he received the foreign representatives, and after a few minutes' delay returned to the palace, in his carriage, escorted as he came, and frequently cheered by the populace as he passed through the streets. To those who are familiar with our state occasions there was nothing new, though to strangers it was all novelty. Every one remarked that His Majesty appeared well and delivered his address in Hawaiian and English with perfect presence of mind, although it was his first public appearance, and under very trying circumstances.

---

UNITED STATES SHIP *TUSCARORA*, (third rate,)  
HONOLULU, HAWAIIAN ISLANDS,  
*February 23, 1874.*

SIR: I respectfully forward to the Department, to accompany my report of the 21st instant, a copy of a letter from the minister of foreign affairs, written by command of His Majesty the King, in acknowledgment of the services rendered the government of Hawaii by this ship and the *Portsmouth*, in the recent political trouble at this capital.

Very respectfully, your obedient servant,

GEORGE E. BELKNAP,  
*Commander, Commanding United States Ship Tuscarora,  
and Senior Officer Present.*

Hon. GEO. M. ROBESON,  
*Secretary of the Navy, Washington.*



DEPARTMENT OF FOREIGN AFFAIRS,  
Honolulu, February 21, 1874.

SIR: I am commanded by His Majesty the King to thank you in his name, and in that of His Majesty's government, and through you, Commander Belknap and Commander Skerrett, of the United States ships Tuscarora and Portsmouth, for the prompt and efficient aid rendered to the local authorities in suppressing the riot in this city on the 12th instant.

The events of the 12th instant, unfortunate as they may have been, served to exhibit the feelings of friendship which exist between the two countries, and the certainty with which this government may rely in cases of emergency upon cordial and disinterested co-operation of the representatives and ships of the United States, as well as those of Her Britannic Majesty.

I have the honor to be, with great respect and high consideration, your excellency's most obedient, humble servant,

W. L. GREEN.

His Excellency HENRY A. PEIRCE,  
*Minister Resident of the United States.*

---

### MERITORIOUS CONDUCT.

No. 12.]

UNITED STATES FLAG-SHIP LANCASTER,  
*Rio de Janeiro, September 10, 1874.*

SIR: It gives me pleasure to bring to the notice of the Department the bravery and presence of mind exhibited by Ensign G. A. Merriam, United States Navy; Thomas Kelly, coxswain; Henry Edgeworth, ordinary seaman; Frank Burns, ordinary seaman; and Dennis Lucy, landsman, all of the Monongahela, in their praiseworthy though unsuccessful efforts to save the life and their rescue of the body of Peter Greavy, ordinary seaman, who fell overboard from the foretop-gallant yard of that vessel on the morning of the 28th ultimo.

Such conduct cannot be too highly commended, and I trust it will receive due recognition from the Department.

Very respectfully, your obedient servant,

WM. E. LE ROY,  
*Rear-Admiral Commanding U. S. Naval Forces  
on South Atlantic Station.*

HON. GEORGE M. ROBESON,  
*Secretary of the Navy, Washington, D. C.*

---

NAVY DEPARTMENT, November 3, 1874.

SIR: The Department has received your No. 12, of the 10th of September last, respecting the gallant conduct of Ensign G. A. Merriam, Thomas Kelly, coxswain; Henry Edgeworth, ordinary seaman; Frank Burns, ordinary seaman; and Dennis Lucy, landsman, all of the Monongahela, on the 28th of August last, in the harbor of Rio de Janeiro, in leaping overboard to rescue Peter Greavy, ordinary seaman of that vessel, who fell from the foretop-gallant yard into the harbor, during exercises aloft, and sustained such injuries as to cause his death. While regretting the loss of a worthy seaman in the execution of the duties assigned him, the Department bears with satisfaction of the commendable and humane efforts of his comrades to save him, in which they would have been successful had not the injuries received caused his death. None the less credit is due them for restoring the lifeless body

to the deck of the *Monongahela*. You will please cause this letter to be read at muster on board the vessels of your command, and furnish a copy of it to each of the persons whose conduct is thus appreciated and commended.

Respectfully,

WM. REYNOLDS,  
*Acting Secretary of the Navy.*

Rear-Admiral WM. E. LE ROY,  
*Commanding Naval Forces. South Atlantic Station,  
Rio, Brazil.*

No. 14.

### REPORT OF ADMIRAL D. D. PORTER.

WASHINGTON, D. C., *November 7, 1874.*

SIR: I have the honor to inclose herewith my annual report, containing suggestions in regard to such professional matters as have come under my observation.

Very respectfully, your obedient servant,

DAVID D. PORTER,  
*Admiral.*

Hon. GEORGE M. ROBESON,  
*Secretary of the Navy, Washington, D. C.*

WASHINGTON, D. C., *November 6, 1874.*

SIR: In conformity with the regulations and special instructions, I submit herewith my report in regard to naval matters.

The most interesting event to our Navy during the past year was the assembling of the several squadrons in the West Indies, where fleet-evolutions were conducted under the command of Rear-Admiral Case.

. Perhaps nothing could have occurred more instructive to officers and men, or better calculated to improve the discipline and efficiency of the service; and if this assembling of vessels could take place oftener, it would be greatly to the advantage of the Navy.

On such occasions a spirit of emulation is awakened among the crews of the different ships, and strangers who witnessed the late evolutions were much impressed with the rapid manner in which raw crews were disciplined and manœuvred both on shore and afloat.

This may in a great measure be ascribed to the system taught at the Naval Academy, which, if it does not produce practical seamen with the facility of the old method, certainly gives an education that will in the long run make better officers.

I took great pains to keep fully informed of everything that related to the West India fleet, and while well impressed with its *personnel*, I regret to say that the fleet showed itself very unsuitable for war purposes, either to contend against the improved class of vessels now being constructed by all foreign powers, or to cut up an enemy's commerce.

In the first place, nearly all our ships were of wood, unprovided with improved ordnance, and only one or two having a speed of ten knots. Now, even the heaviest war-vessels built in Europe far surpass this speed when fitted for sea.

I need scarcely say that officers of the Navy, who expect to take part in any conflict that may arise between our country and a foreign power, look with anxiety for an improvement in our ships, more particularly since the West India drill made it apparent to the youngest of them that our combined force of vessels was incapable of a successful encounter with a fleet one-fourth as large built on modern principles.

Indeed, one such ship as the British iron-clad *Invincible* ought to go through a fleet like ours and put the vessels *hors de combat* in a short time, for she could either run them down or destroy them at long range with her heavy rifled guns.

We have no ordnance that would make any impression on such a ship at a distance of over six hundred yards, and no vessel of equal speed in our Navy would be placed under her fire by a prudent commander.

I state facts that are known not only to our own, but to foreign officers who are visiting among us, and who in the performance of their duties transmit such information to their governments. I do not, therefore, consider that I am betraying our weakness, which is already too well known to every nation but ourselves.

Our people are under the impression that we have formidable ships and are incurring large expenditures to maintain a navy, while in fact we have none of the former, and our expenditures are small when compared with those of other nations who have less extensive coasts and fewer interests at stake, for we are the second commercial country in the world, with principles to defend and rights to maintain which are certainly of more importance than a few millions of dollars.

The disbursement of money for building and equipping vessels of war, instead of being a tax on the people, is really an encouragement to the working-classes, enabling them to live while contributing by their skilled labor toward the defense of their country.

When Captain Ericsson built the first monitor the days of wooden and semi-armored fighting-ships were numbered; the great three-deckers of Europe were laid up in ordinary, and if foreign nations have since that time constructed wooden war-vessels, they have been fast cruisers, mounting heavy rifled guns, to police the seas and cut up commerce.

After the battle between the Monitor and the Merrimac it was evident to experienced naval officers that the monitor system would supersede all others then existing, and foreign nations as well as ourselves went to work to improve upon Ericsson's ideas. The result has been that European nations have built up large iron-clad navies, but we have done nothing of importance since the close of our civil war.

When that struggle terminated we had a respectable force of monitors, some of them capable of contending with any vessels afloat, and for a short time we were really in a condition to defend our coasts against a foreign foe. We had also a system of ordnance superior to any other then existing.

These vessels, however, built in a hurry, of timber not thoroughly seasoned, have become unseaworthy, and their guns, though still formidable at close quarters, cannot compete with the heavy rifled ordnance now used abroad.

I may therefore say that our Navy, as compared with others, is like a foot-soldier armed with a pistol encountering a mounted man clad in armor and carrying a breech-loading rifle. It would be easy to imagine how little chance the man on foot would have should a conflict occur.

Yet the day will come when the men who must lead the Navy into battle will find themselves placed in a position that will require all their

professional resources, for they will not be provided with proper means to meet the iron-clad ships of other powers.

We have now but 66 monitors fit for service out of the forty-eight which appear on the Navy Register; twenty were long ago condemned as unfit for service.

The available monitors formed part of our West India fleet which lately assembled; but they would have been of little use in a fleet-fight on account of their want of speed.

Their turrets and hulls cannot resist the heavy rifled projectiles now in use, and they cannot raise their turrets from their seats in a sea-way, for the water would rush in and deluge their holds.

These monitors were built during the late war for a specific purpose, which they amply fulfilled, viz, to operate in smooth water against fortifications, and for the defense of harbors. For such service they proved themselves admirably adapted, and their turrets and hulls, well marked with heavy shot, which did no harm, showed them practically invulnerable *at that time*. Possessing the heaviest ordnance then known, they were a match for any single ships afloat; but since they were built 10 and 11 inch plates have been easily perforated by the 11-inch rifle.

The Whitworth muzzle-loading 9-inch gun, with a charge of fifty pounds of powder, has fired a shell weighing upward of four hundred pounds through a shield composed of three 5-inch plates of iron, inter-laminated with two 5-inch layers of iron concrete, the whole forming a mass of 25 inches thickness, while the 14-inch iron plate has been bored through and through by the 12-inch Krupp gun, with a steel shell, at a distance of 1,089 yards.

Either of the above-mentioned guns could perforate the turrets of any of our monitors, while the vessels from which they were fired could remain at a distance where our smooth-bore guns could do them no harm.

If such guns could so easily demolish the turrets of our monitors, what chance would the latter have against a ship like the *Inflexible*, now building in England?

She is of 11,095 tons displacement, 8,000 indicated horse-power, is to be driven at a speed of fourteen knots by twin-screws, and it is understood she is to mount four 81-ton guns, throwing shot of 1,600 pounds weight.

It is very evident that such a ship, with her 24-inch plates of iron, would receive no damage from one of our monitors, except at very close quarters, a contingency which, with her speed, the *Inflexible* could always avoid.

I mention this vessel as she is of the latest type, with all the most recent improvements; but to my certain knowledge there are upward of one hundred other iron-clads superior to anything we now possess in speed, guns, and armor.

I draw this comparison to show how illy adapted our monitors are to act in concert with a fleet against any vessels carrying heavy rifled ordnance.

When it was proposed to repair the monitors, I examined them to ascertain if they would bear additional iron on their hulls and turrets, with the following result:

Four inches of additional plating around the turrets of the *Passaic* class would weigh 51 tons, and cost about \$22,000, and would bring the vessel down in the water about 4 inches, making the turret 15 inches thick. Eight inches around the turret would weigh about

210,000 pounds, cost about \$44,000, and bring the vessel down 8 inches, making 19 inches of plating.

The plating on the hull of a monitor of which the armor is 6 feet (Passaic class) weighs, for a course of 6 feet deep, and 6 inches plating all around the hull, 360 tons, (of 2,000 pounds,) which would bring the vessel down about 24 inches more in the water, making, with turrets and side-armor, 28 inches. This would bring the monitors' decks pretty close to the water, and render it impossible to send them outside a harbor.

But even this weight could not be placed on the monitors; they were not originally built to bear it. Their hulls are too light, and they could ill carry any extra weight beyond what they have at present, except, perhaps, on their turrets.

To increase the thickness of the turrets it is necessary to put on laminated plates, for we have no machinery in this country capable of rolling heavier than 5 or 6 inch plates, and they would not stand 12-inch rifled shot.

Thus you will see that the monitors, with their present batteries, speed, and armor, are in no respect a match for the new style of iron clads with their powerful rifled guns; and it was apparent to myself and to every officer of the West India fleet who had studied the subject that the monitors would have been of little avail if brought in collision with the foreign vessels in Cuban waters.

These are matters that can be thoroughly appreciated only by professional men; and although there is not an officer in our Navy who would hesitate to command such vessels as we have, in time of war, yet naval men feel that they will be compelled to sacrifice life and reputation if ever they go into action with monitors outside a harbor.

To the younger officers, who have not experienced the inconveniences of war, and look upon it merely as a pleasant episode, it matters little in what sort of vessel they go to sea. They accept any situation, and delude themselves with the hope that, no matter what the odds against them, victory will perch upon the banners of the United States Navy. But there will be a rude awakening to the actual condition of affairs if we do not follow the example of foreign nations and place our Navy in a proper state for service.

There is not a navy in the world that is not in advance of us as regards ships and guns, and I, in common with the older officers of the service, feel an anxiety on the subject which can only be appreciated by those who have to command fleets and take them into battle.

If called upon at this time to command the naval forces of the United States, in case of hostilities, a position which it is my ambition and my right to fill, I should be put to my wit's end to succeed with such an incongruous set of vessels as we now possess. Prudence would probably recommend that they be shut up in port and no fleet operations attempted with them—sending the wooden vessels abroad singly to do all the damage possible until captured by the enemy; our 50-gun frigates perhaps succumbing to a 2-gun clipper armed with 10-inch rifles, and our smaller cruisers driven off by merchant-vessels carrying rifle-guns of lesser caliber.

This is no exaggeration. It is simply what will occur when we go to war, and it would be much better to have no navy at all than one like the present, half-armed and with only half-speed, unless we inform the world that our establishment is only intended for times of peace, and to protect the missionaries against South Sea savages and eastern fanatics.

So different was the speed of the various vessels in the West Indies,



during exercises in fleet formations, that considerable difficulty was encountered in getting them in anything like order; and, as far as gaining experience in fleet-sailing was concerned, the object could have been better attained by employing the same number of steam-launches.

I do not mean to say that the officers derived no benefit from the fleet-exercises, since they soon became aware of the inefficiency of their vessels for war purposes, and the first step toward improvement is for a nation to understand its weakness.

Of all the wooden vessels built during the rebellion, but three available ones are left, constructed of unseasoned timber, the best that could be procured at the time. All the others are decayed and laid up, encumbering our yards, or broken to pieces, or sold out of service.

Of the forty-eight so-called iron-clads now on the Navy Register, thirty-one can never be of the least use in peace or war, unless sunk as obstructions to channels.

Out of the ninety-nine wooden vessels on the list, only thirty-nine come properly under the head of "vessels of war," that is, vessels propelled by steam and sails, and carrying efficient guns; and of all these not one could contend with a foreign ship of equal size. So, in fact, we have only thirty-nine wooden ships of war and six monitors, but one of which, the Dictator, has good speed, and she is sadly out of repair.

There were two classes of vessels commenced between 1862 and 1865, the Connecticut and the Congress class, which, had they been built of seasoned timber, would have proved themselves efficient with proper batteries. These ships have been severely criticised, but nevertheless have proved good vessels, and had they a little more beam would be remarkably fine ones. They were constructed at a time when we were threatened with foreign interference in our domestic affairs, and answered the purpose of preventing it. They were afterward improved by adding another deck, which enabled them to berth their crews comfortably.

This type of vessel is now being built by the British, with more beam and greater steam-power.

But with three exceptions, all our vessels of this class have passed away, those on the stocks being too much decayed ever to be launched.

It will be readily imagined what a terrible scourge vessels like those just mentioned would be to an enemy's commerce in time of war, and it is likely that similar vessels with improved machinery and additional beam will again be introduced into the Navy, for it is certain they were the only ones in the service that proved themselves fast and good sea-boats at the same time.

For all that, such ships are only fit to cruise against an enemy's commerce; as for want of resisting power they could never form part of a line of battle in a fleet-fight.

One or two of these vessels took part in the exercises at Key West, but I do not see that they were better adapted for that kind of business than the rest.

You have no doubt a general knowledge of the condition of all the ships in the Navy, but it is not to be expected, in the multiplicity of your duties, that you could be as familiar with the subject as a professional man; I will therefore recapitulate what appears to me to be the state of the several vessels at the present time. Perhaps a clear statement of their condition may induce Congress to do something toward renovating the naval service.

Our largest vessels, the Colorado, Franklin, Wabash, and Minnesota, each mounting about 40 guns and costing in the aggregate nearly four



millions of dollars, were built nineteen years ago. With the exception of the Franklin, they have only auxiliary engines, and their average speed does not exceed seven knots, the Franklin alone making nine knots.

They have been frequently repaired and will not stand much more pulling to pieces. It would be cheaper to take their machinery out and use them for receiving-ships, building a smaller class of vessel to supply their place.

It is not necessary for the commander-in-chief of a squadron to have one of these large vessels for a flag-ship. He could perform his duties better in a smaller vessel with much less expense to the Government.

For instance, a ship of the Tennessee class can be maintained at one-third less expense than the Franklin, and, with the addition of an improved battery, would be a much more formidable vessel.

The Connecticut, Antietam, California, Delaware, Java, New York, Iowa, Niagara, Pennsylvania, and Susquehanna have all gone to decay, only the Tennessee and Florida being in condition for service. Of the Lancaster class, the Lancaster, now on the coast of Brazil, is so much out of repair that it would be unsafe to send her home, except in summer. She could hardly weather a winter-gale. This ship is a slow sailer, and can only be repaired at great expense. Her last repairs were made with unseasoned timber, which has shrunk away from the live-oak.

The Brooklyn, Pensacola, Hartford, and Richmond are slow, old-fashioned ships, and should be rebuilt on new models and provided with improved machinery and guns, a portion of the latter rifles.

The Severn is worn out, and the Congress and Worcester after their present cruise is up cannot be repaired to advantage, but must be entirely *renewed*. The Powhatan is a good side-wheel vessel with fair speed, and, though not a perfectly efficient cruiser, is still a useful ship-of-war. The Saranac is an old side-wheel vessel, rather slow, and would stand no chance in battle with a ship of the modern type of half her size.

The Alaska, Benicia, Omaha, and Plymouth are fine vessels of their class and approach perfection nearer than any other of our vessels, yet they cannot work their batteries with effect, either because they have not sufficient beam for the guns, or the guns are too long for the beam.

The Lackawanna, Ticonderoga, Canandaigua, Monongahela, and Shenandoah are a handy class of vessel, but are without speed. They have been much improved by alterations during the last four years, but no one would now think of building ships on their models.

The Juniata, Ossipee, Iroquois, Kearsarge, Wachusett, Mohican, Tuscarora, and Wyoming are all fair vessels, but need improved machinery and guns. Of the Nantucket, Narragansett, Ashuelot, and Monocacy, the two former are worn out, and the two latter are only fit for surveying duty in Chinese waters.

The Swatara has proved herself a good vessel, and has considerable speed. When the Quinnebaug, Galena, Vandalia, Marion, and the eight new vessels are finished, it is to be hoped they will do as well.

The Kansas class of vessels—six in number—should be rebuilt on new principles, with improved batteries and machinery.

The Frolic, Gettysburg, Tallapoosa, Wasp, Palos, and Dispatch, are nothing but dispatch-vessels; the last-named would, in time of war, be the only efficient one.

The seventeen sailing-vessels are, with one exception, laid up in ordinary, where they will probably remain until wanted for store and receiving ships, and the four store-ships are mostly worn out.

As you are well aware, of our iron-clad monitors, the Ajax, Canonicus, Dictator, Mahopac, Manhattan, and Saugus are in good condition as far as they can be made available, and are laid up temporarily in Pensacola; and the Catskill, Jason, Lehigh, Montauk, Nahant, Nantucket, Passaic, and Wyandotte are undergoing repairs to place them in the same condition, which will occupy about ten months.

These vessels might have been made stronger and more impervious to heavy rifled shot, by putting an additional 5 inches of solid plating on their turrets and hulls, but in that case it would have been impossible to send them outside a harbor, and the expense would have been so great that it would have been better to construct new vessels.

A hull to carry so much iron must be very solidly constructed with double bottom and sides, which would add so much to the weight of the above-mentioned vessels that they would be liable to sink in smooth water.

Their construction was originally planned by very clever men, and they were never intended for heavy weights, any more than a sloop of the Congress class would suit to carry 11-inch guns in broadside.

Now they can be moved from one port to another, going long distances, though with some risk to the vessels and their crews; but no vessel of the small monitor class, with nothing to prevent the sea breaking completely over her, can be considered a satisfactory sea-going ship. Depending, as the monitors do, upon the junction between the turret and the deck being perfectly water-tight, when the turret is raised to permit it to revolve, this water-tightness no longer exists. Consequently, in a sea-way these vessels cannot revolve their turrets and fight their guns.

Besides this, a small monitor of the Passaic class while being deluged in rough weather would have her ventilation affected so as to destroy the health of her officers and men, a most important matter when the necessity of keeping a ship's company in good health is considered. Hence, I am of opinion that the class of vessels above mentioned should be kept entirely for harbor defense.

Of the double-turreted monitors, the Monadnock, Miantonomoh, Amphitrite, Roanoke, and Terror, (really valuable vessels,) want thorough repair, and entire new hulls of iron and new engines. They could not now go with safety from port to port, although intended for sea-going vessels, and capable, when in order, of making long voyages. Some of these vessels are now under repair, and, as they may be converted into fine iron-clads, I would recommend that they be altered as follows:

I propose that their hulls should be built on the bracket-plate arrangement, like the British armor-plated vessels, and like the torpedo-boat Alarm, the latter the first vessel built on this plan in the United States.

This would give these monitors a double bottom and double frames throughout, and would enable them to carry nearly twice the thickness of iron on hull and turrets, or, at least, enough to make them invulnerable against the nine, twelve, and eighteen ton guns generally in use in foreign navies.

If solid oak backing is used the resisting power would be still greater.

These vessels should have engines of great power and simplicity of design, of the compound type, which would enable them to cross the ocean or cruise on our coast in the heaviest weather.

Both the Monadnock and the Miantonomoh have given evidence of their ability to make long sea-voyages with comfort to officers and men, and this kind of vessel would no doubt live in a gale where an ordinary frigate would founder. In the reconstruction of these vessels I would

recommend a change in the manner of revolving the turrets, either having them move on balls or rollers, or have high coamings fitted with India-rubber packing to reach to the sill of the gun-port, for the present system is liable to the objection of water getting in in a sea-way. The turrets have also unreliable machinery to raise them, to say nothing of the danger of being completely disabled; while revolving on their pivot, by heavy shot.

Great diversity of opinion has existed in the minds of experienced men with regard to the best form of fighting-ship, and after examining over a hundred different plans of foreign iron-clads, I think I am justified in the conclusion that vessels like the *Monadnock* and *Miantonomoh* are better adapted for protecting our coasts and harbors, and for fighting, than any others yet built.

I have seen the *Monadnock* in all weathers, and riding out heavy gales at anchor on our coast, yet she rode the sea like a duck.

This class of vessel has a fore and aft as well as a broadside fire, and no ship can be considered an efficient fighter unless so constructed.

To make these monitors more enduring against shot, their plating should be solid on the sides and turrets, or each thickness of plate should be at least  $5\frac{1}{2}$  inches, the heaviest we are able to roll in this country. The laminated plates placed upon our vessels during the rebellion were of 1 inch thickness, and adopted from necessity, we having, in the early period of the war, no rolling-machines that could turn out heavy plates.

Besides, at that time, the laminated plates were sufficient to resist the enemy's projectiles; but the solid plate has the advantage, inasmuch as so great a weight of iron is not needed when it is used, since experiments prove that a properly-rolled 4-inch plate has greater resisting power than 6 inches of laminated plates.

The double-turreted monitors, when reconstructed, could be made to carry 20-inch turrets of 5-inch plates, or thicker if they could be obtained. This would bring them down about 9 inches more in the water, and additional draught would also be caused by the side-plating, which could be remedied, however, by raising the sides, giving the vessels more free-board, and allowing height for larger boilers.

No ship is a complete fighting-vessel unless she is able to ram her antagonist, and it will be found in the event of war between two great powers that the fleet possessing the best rams, other things being equal, will win the battle.

In ramming, the crushing process is superior to the piercing, and I would recommend that the bows of our iron-clads be made very strong and especially adapted to this purpose.

The present system of naval tactics will serve very well to keep a fleet in order and to concentrate the vessels previous to an action, but when the battle commences and the ships are enveloped in smoke there is an end to order and signaling by flags, and every captain must act on orders previously given or on his own responsibility. It is evident that rams and torpedo-vessels will have matters pretty much their own way then, and the more smoke there is the better it will be for them.

It would be impossible for an enemy to avoid rams and torpedo-vessels in a dense smoke, unless continually maneuvering for the purpose, thereby breaking up the order of battle.

The decks of our monitors have hitherto been insufficiently protected. Their deck-armor should be increased to 3 inches of steel, covered with wood, for being of rather low free-board these vessels are liable to damage from plunging shot.

There are a variety of matters to be taken into consideration in the

reconstruction of the monitors, for it would be only a waste of money to rebuild them altogether on the old plan, with the prospect of their turning out inferior vessels, when so many new improvements can be introduced from plans perfected by foreign powers.

The chief improvements should be invulnerability and speed, without which latter requisite a ship of war is of little use, except to assist in the defense of fortifications against the attacks of a fleet.

Harbors cannot be protected by forts alone, for experience has shown that even wooden ships with ordinary smooth-bore guns can pass the heaviest batteries in comparative safety.

History records among others the following places defended by heavy works that were obliged to succumb to ships, viz: Copenhagen to Nelson, St. Jean d'Acre to the French, passage of the Dardanelles to Sir John Duckworth, Algiers to Lord Exmouth, San Juan de Ulloa to the French and to the Americans, Moro Castle to the English.

Among the numerous instances I might cite our own successes of recent date in the south to show that monitors are as necessary in the defense of harbors as are the land fortifications.

For instance, suppose a fleet of twenty iron-clads were to attack the forts at the "Narrows," in the bay of New York, and that one of them should get by, what harm could the forts do the vessel after it had once steamed past Castle Garden, where it could with impunity lay the city under contribution and burn at leisure all the shipping?

No enemy would be likely to attempt such a task, however, with a fleet of well-built monitors inside the harbor to follow them up.

Forts are undoubtedly most necessary means of defense, but there are none in existence that a modern iron-clad fleet could not pass, unless aided by monitors, torpedoes, and obstructions. Ships have a great advantage over forts, for they can retire from an engagement when worsted and return with re-enforcements. Ships that can bring ten guns of the heaviest caliber against one must eventually succeed.

All monitors, and, indeed, every vessel of war, should be fitted with a double screw, for the power of turning rapidly will give a ship so fitted great advantage over one with a single screw, a matter fully appreciated by naval men.

I have adverted to the turning of the turrets in monitors. The advocates of the spindle system will, no doubt, raise objections to any other, but one great fault of this plan is, that in a sea-way a ship would be filled with water if the turret was raised. A heavy shot, too, that might not penetrate the turret, might, perhaps, unseat it and render it unserviceable.

When steam is down the present method of turning renders it impossible to use the turret, as there is no means of working it.

I have been struck with the objections to the method in use for revolving monitor-turrets, when so simple a contrivance might be adopted, as is demonstrated at Harlem Bridge, where 150-tons are revolved by a hydraulic jack in the hands of one man with comparative ease.

There may be objections to the introduction of this plan into monitors, of which I am not aware, but as a practical and simple method it seems to me preferable to any other.

In organizing the system on which a navy has to be built, it is necessary to take into consideration: first, the needs of a country for the protection of its commerce; second, the extent of coast to be defended and the exposed condition of the sea-board cities; third, the relations of the country with the other powers of the world and the advancement continually made in the science of maritime war; fourth, it is necessary to



look deficiencies in the face, and, at whatever cost, place the Navy in condition to meet any emergency.

This is not the condition of our own Navy at present. When that is fully considered, it would be the height of folly to call it "efficient," for while that delusion lasts no supplies will be given by Congress, and we will grow more and more inferior every year to other powers.

War is at all times a dreadful alternative; still more so when forced upon a nation so utterly unprepared as we are at present.

I speak strongly on the subject because I know the real condition of the Navy and its present inability to meet the wants of the nation, and I may yet live to see my country humiliated, from the fact that no attention has been paid to the recommendations of those whose duty it will be to lead our ships into action or direct their movements in time of war.

Now is as good a time as any to inaugurate a comprehensive system of naval *defense*, which would be the proper term to apply to the operations of a non-aggressive nation that does not require a navy with which to wage aggressive war, but simply to protect its coasts, cities, and commerce.

\* \* \* \* \*

We can only maintain our position among nations by following in their wake in naval matters; if we do not, as we once did, set them the example in the quality of our ships and guns.

We have never had a settled policy with regard to the class of vessels we should build, and I here beg leave to suggest a system which, if adhered to, will soon place us in a very respectable condition, enable us to defend our coasts, and do great damage to our enemies.

Owing to the introduction of the torpedo as a means of warfare, it is not likely that any nation will attempt to invade the coasts and harbors of an enemy as they once did, when protected by these devices, in addition to forts, monitors, and rams, nor can the ports of a belligerent be thoroughly blockaded if proper rams and torpedo-vessels are built in sufficient numbers to operate outside. It is impossible to protect a harbor by forts and sunken torpedo-mines alone, for our experience during the rebellion satisfied us that torpedoes, unless protected by powerful vessels and forts combined, would be almost useless.

There is no difficulty in taking torpedoes up, no matter how carefully planted, if not under the guns of a moving fleet.

What would prevent boats at night from cutting the wires of any torpedo-net in the channel leading into New York, if the boats were supported by a powerful fleet waiting to move up to the attack?

Even without groping for the hidden wires, the sunken torpedoes could be shattered by others devised for such purposes, and the mines sprung or destroyed by concussion, leaving the way open.

No better plans for defending channels leading to cities could have been devised than those used by the confederates during our war. Their ports and rivers were full of infernal machines, and yet, except at Charleston, no fleet was ever stopped by their torpedoes or their batteries, which were of the strongest kind. Even at the place I have mentioned, it was found, after the evacuation, that nearly all the sunken mines had been rendered harmless by salt-water or interior condensation. Upon one occasion the Ironsides anchored directly over one of these mines, containing a ton of powder, and remained there twenty-four hours, while the enemy were endeavoring in vain to explode it by electricity.

To be sure, gun-cotton, as at present arranged, does away with the

difficulties experienced in those days in exploding submarine mines, but there is no difficulty in breaking torpedo wires, even under the walls of a fort, if not protected by heavy ships and guns afloat.

Even suppose our channels obstructed, and that an enemy does not care to try a passage, the blockade of a harbor is just as humiliating and damaging. Mines planted in channels will not prevent an enemy from shutting up New York at both ends, if he is superior to us in iron-clads; and it is, therefore, imperatively necessary that we should at once provide for building annually so many tons of monitors, say five thousand tons for the present, until we have thirty first-class monster rams of great speed, armed with monster guns, in addition to our present force, and at least fifty iron torpedo-boats of good speed, and not less than one hundred tons each.

The latter should be hauled up under cover, fitted with all the modern improvements, and kept for an occasion, while hundreds of others could be improvised after the commencement of a war.

This is partly the system pursued by Great Britain. She builds annually twenty thousand tons of naval vessels, and finds it the cheapest way of averting war and protecting and increasing her commerce, which has doubled since 1865, while ours has dwindled away to exactly one-half.

Too much confidence is felt by our Army torpedo-officers in the effects of their sunken devices on passing ships.

No doubt if a torpedo should explode under a vessel it would instantly destroy her; but out of the many planted on the bottom few have been found effective in time of need, especially after having lain for a considerable period; and then, unless the torpedoes are to be fired upon impact or by circuit-closers, they could do no harm to a passing fleet, in a dark night, with lights obscured, at a distance of one hundred yards; and what chance would there be of exploding a torpedo-nest at the right time? Even supposing a few ships were destroyed, that would not prevent the others from going ahead.

All this tends to show that it is not explosions on the bottom upon which we must rely, but on torpedo-vessels and floating projectiles below the surface of the water.

Recent experiments in England develop facts which were partly known to me before, but these trials were conducted on a scale of liberality by the British government which has put at rest any doubts on the subject, and a commander has the satisfaction of knowing that he can run within forty feet of a mine of gun cotton, weighing five hundred pounds, without danger to hull or machinery.

A short time since, a committee of naval officers made some interesting experiments with submerged torpedo-mines on the ship *Oberon*, of 649 tons, late packet steam-vessel. The first explosion was with 500 pounds of the Waltham Abbey disk gun-cotton, confined in a service mine-case.

This was fired at a horizontal distance of 100 feet from the nearest side of the *Oberon*, the mine being at a vertical depth of 36 feet below the vessel's keel, and diagonally 110 feet.

The explosion proved entirely harmless, as did also a second and a third attack at 80 and 60 feet distance.

At the last experiment the mine was sunk only 50 feet outside the outer line of the ship, when all present expected that the vessel would be blown to pieces.

Great pains had been taken to insure her against sinking after the explosion, but the precautions were all unnecessary.



"The mine was fired from Fort Monkton by electricity; then followed the usual upheaval of water, to the height of more than a hundred feet."

"As the disturbance struck under the vessel's starboard side, she rose to the motion of the thrown-up waves to the height of several feet, and fell again into the outer swell, surging up on the crater's edge."

The Oberon remained apparently unharmed, and it was only after she had been placed in dock that the damage could be seen. It was considerable, but not sufficient to make her leak; and had she been one of a fleet passing a fort, she would have only had her engines disabled, and could still have been towed onward to her destination.

Had the Oberon been thirty feet nearer the mine she would probably have gone down, but this experiment shows that ships must either be in contact with torpedoes or nearly over them to receive any material damage; and in shallow water the direction of least resistance being over the torpedo instead of toward the vessel's bottom, the chances are that a ship with little draught would pass unscathed a torpedo only twenty feet distant.

I have myself seen a side-wheel steamer's paddle-box blown off, the buckets broken, and a number of bulkheads thrown down by a torpedo exploding under the wheel, while the hull remained uninjured, and I fired a hundred-pound torpedo on the Mississippi in ten feet of water, only fifteen feet from the bow of a coal-barge, without the latter receiving the least damage, while twenty pounds in contact with the hull would have blown the barge to atoms. These experiments show that ships have a chance to escape destruction from sunken mines. Where there are a number of vessels, some of them must get by, as one explosion will probably cause the chain of mines to be broken up.

By experiments lately made in Sweden, it was shown that a mine of dynamite one hundred and six feet from two other disconnected mines exploded them both by concussion; from a similar shock the electric wires would be broken.

There are chances, then, which should not exist, for a fleet to pass a fort, and they can only be neutralized by torpedo-vessels, monitors, rams, sunken mines, obstructions, and forts combined.

To build a great number of fighting-ships on any but the monitor plan seems inadvisable, as we require mostly iron vessels for the defense of our coasts.

It is beyond our power to wage war on the coast of any European nation that is provided with proper appliances for defense. Our policy should be protection to our coasts and aggressive war on an enemy's commerce.

If we should fit out powerful iron-clad fleets, and they should engage an equal force of the enemy, the destruction of either or both forces would have no effect to bring about a peace; neither country would suffer materially.

It is only by destroying the commerce of a great nation that we could bring her to terms; hence, one vessel like the Alabama roaming the ocean, sinking and destroying, would do more to bring about peace than a dozen unwieldy iron-clads cruising in search of an enemy of like character.

For this reason, I would recommend that we should no longer repair the old wooden ships, but entirely rebuild them with new hulls and improved machinery and guns, and we should build up a fleet of swift wooden cruisers, of at least twelve hundred tons, with the heaviest batteries and a speed of not less than fourteen knots.

If we were to lay up our present vessels, and build a new set, with

improved machinery, it would be economy in the end; the vessels would be run on half the present amount of coal, would require fewer men, and would do their work twice as well.

Great Britain, following the example we set her during the rebellion, is building a number of such vessels, but is improving on our models, machinery, and guns of that period.

I lately read an account of the trial-trip of two of these vessels just built—the *Raleigh*, 22 guns, iron-screw frigate, 3,215 tons, with sheathed bottom, and 800-horse power, and the *Sapphire*, 14 guns, screw-sloop, 1,890 tons, and 350-horse power. The former on her trial-trip made 15.3 knots, and the latter, it is supposed, will do still better.

There are now building in England the following fast-clipper steamers, that could entirely destroy the commerce of an enemy, with no chance of being overtaken, viz: *The Bacchante*, 14; *Diadem*, 16; *Diamond*, 14; *Egeria*, 4; *Swan*, 26; *Sappho*, 4. Besides these, there are one hundred and nineteen other sloops and frigates, wooden and of the composite kind, which, if not of equal speed, are very fast vessels, and of the most destructive character.

This is the policy of a great commercial nation, our only superior in commerce, and every year she adds twenty thousand tons to her navy, never by any accident getting behindhand. Who can interfere with British commerce, or maltreat a British subject in any part of the world without paying damages?

Great Britain has a coast-line twenty times less in extent than our own, and the combined navies of Europe could not approach it with safety, while with us, as matters now stand, a single iron-clad frigate could blockade our shores from Maine to Texas.

Different opinions prevail with regard to the best plan of constructing iron-clad cruisers that can safely go around the world without racking themselves to pieces.

It is necessary that we should have a few of these, say six, to convoy and protect bodies of troops in case we desire to land on an enemy's coast.

Experience teaches us that wood and iron combined do not agree, and ships built on that principle soon decay.

Heavy iron-clads, with high freeboard, are exceedingly uncomfortable, and rack themselves to pieces in a sea-way, and, in the race between heavy ordnance and iron-sides, the guns have gained so great ascendancy, that it is doubtful whether wisdom would dictate building a ship with heavy plating more than three feet above the water. There is a limit to the quantity of iron which a ship can carry, while there seems to be, comparatively, no limit to the size of guns, and the 38-ton cannon now contracted for at Krupp's foundry will perforate any iron-clad ever built.

History repeats itself in the course of centuries. Men fought in armor until musket-balls made it useless, and the same principle is beginning to apply in the matter of iron-clad ships of war, especially as regards turrets and topsides.

I believe that iron sea-going ships of war will ultimately be built without any armor on the topsides; that the hull, for three feet above and below water, and the decks will be made as far as possible impervious to shot, but that all the upper works will be ordinary iron through which the shot will be allowed to pass.

This, it is true, will not afford perfect protection to the ship's company in action, as shot passing through the thin iron will knock down everything in its course; but this is better than having a turret of six

teen inches thickness crushed in upon a crew, and I believe men will fight longer and better on an open deck where they can see their enemy and know what is going on.

It is very demoralizing to be shut up in a turret and have men killed by concussion, with the likelihood of a stray shell coming into the port and killing all hands. A few years ago officers and men would scorn such shelter, and I believe at this day that almost any one would rather take his chances on the open deck.

Uncovered guns run little risk of damage by shot at sea. When a vessel is rolling, not more than one shot in twenty takes effect; and there are no serious objections to guns on the open deck, provided they are covered from grape and canister. Bulwarks could be thickened to extend a little over the height of the gun, but only in front of it.

I propose that the hulls of sea-going ships should be built as strong as the monitor hull, and light bulwarks and upper works made of iron, with light iron spar-deck covered with wood planking.

A vessel the length of the Monadnock could carry eight heavy guns amidships, that could, in action, be run out in broadside. Such a ship might have all her upper works cut away and still be fit for battle. A vessel of this kind should be built without head-booms, and her forward and after gun should be so arranged as to run out to give her a fore and aft fire. Add to this a double screw, and you will have a good sea-going fighting ship.

A vessel of six hundred or more tons displacement than the Monadnock would carry twice as many guns as she does now, and having light upper works, would be a good sea-boat and lively in any kind of weather. The guns could be fitted to lower below the deck when loading, like the English gunboats.

A vessel of this kind should be built on the bracket system, with double bottom and top frames strongly connected with the hull.

Such a ship with the same steam-power would have greater speed than one of the heavy European iron-clads, for she would have much less weight to carry. All her upper works being of light iron, with wooden sheathing to her bottom, she would cost much less and would last for years.

To enable such vessels to carry a heavy gun right on their bows, they should be constructed with projections forward under water, like the English ships *Northumberland*, *Hercules*, *Bellerophon*, *Invincible*, &c., and the torpedo-vessel *Alarm*, just built at New York.

The latter has now mounted right on her bow a fifteen-inch gun, and could sustain one of twenty inches, gaining sufficient displacement and buoyancy forward by reason of this projection, which, on the ships I propose, would answer the purpose of a ram.

I have given a general outline of what these sea-going iron-clads should be, and think that the generality of intelligent officers will coincide in my opinions.

These cruisers could keep the sea under sail, as well as wooden ships, and I believe their guns would be fired with greater rapidity and precision than would be possible from a turret.

Turreted cruising-ships can only be built with high freeboard, which renders it necessary to cover their sides with heavy plating all the way up. There must be a limit to this plating, which can never be made thick enough to resist the largest guns. Six or eight heavy steel shot striking at the water-line would drive in their sides and probably cause them to sink, or withdraw from action to repair damages, if such a thing was possible.

## GUNS.

We have three classes of guns in our Navy which had no superiors *of their kind* in any country, viz, the fifteen-inch, the eleven-inch, and the nine-inch.

These are, in fact, peculiar to the United States Navy, and at the commencement of our civil war they were the best guns afloat. Since that time, owing to the immense improvements in plating iron-clads, it has been found necessary to construct heavy rifled ordnance for the purpose of perforating the iron.

Against wooden ships our cast-iron guns are sufficiently effective at the ordinary ranges where a ship can be struck at sea; but there should be a proportion in ships' batteries of heavy rifled cannon, which we have not on hand, and of which at present there seems no likelihood of our obtaining a supply.

Many attempts have been made to convert our cast-iron guns into rifles, and the Parrott rifled gun cast during the late war was expected to accomplish great results. The Parrott gun, however, proved a failure, and on several occasions caused more destruction, by bursting, to the crews of our own vessels than they did to the enemy.

Late experiments with the fifteen-inch gun prove that it will not stand the test of rifling. Whatever may be the cause of this failure, or whatever the prospect of remedying the evil, confidence in rifled cast-iron guns has been destroyed, and it would not do to introduce them into the Navy until more satisfactory results are obtained.

It is my present opinion that cast-iron guns are not fit for rifling, and that all cast-iron rifled guns are liable to burst at the fiftieth fire.

We have trifled for years over an important matter that might have been decided in a few months, and all that is now left us to do is to go to work, and either procure from abroad the requisite number of large rifled guns, or else establish a Government foundery where we can construct them to our own satisfaction.

By reason of this proposed change in our ships' batteries, it is not desired to dispense with fifteen, eleven, and nine inch smooth-bores, but to have a proportion of rifled guns of heavy caliber mixed with them, so that our vessels will not be forced to go into action with only smooth-bores against long-range guns which the former cannot reach.

To establish our own foundery would require a considerable outlay, but there is no other way of producing heavy rifled guns in the United States; for private individuals would not undertake to build guns for the Government, unless they were paid for the plant as well as the guns, and it is altogether likely that we should have better ordnance built by Government than by contract.

What we require for immediate service is: 1st. A class of steel breech-loading guns, superior to the seven-hundred-pounder thirty-five-ton rifled gun. These are needed for the monitors, which should each have one smooth-bore and one rifled gun. 2d. Guns superior to the four-hundred-pounder eighteen-ton gun, for our sea-going iron-clads and for pivot-guns in our wooden vessels. 3d. Two-hundred-and-fifty-pounder twelve-ton guns for our smaller vessels, as pivot-guns, which would be equivalent to nine, ten, and twelve inch rifles.

"Taking the penetrating powers of the shot from these guns, on leaving the muzzle, into consideration, I find that the twenty-five-ton gun is about three and a half, the eighteen-ton gun more than three, the nine-ton gun nearly twice, and the six-and-a-half-ton gun one and a half

times as powerful as our heaviest sixty-eight-pounder, while at long ranges, say one thousand yards, it is greater still."

The twenty-five-ton gun rises to more than seven and a half times, the eighteen-ton gun to seven times, &c.

This comparison is made merely to give a general idea of the advantage rifled guns will possess in any future contest at sea.

Similar comparisons hold good with regard to other rifled guns. The total energy of the heaviest rifled cannon increases even more rapidly than the penetrating power per inch of circumference.

This maintenance at long ranges of the penetrating power of rifled projectiles is well understood and appreciated by every nation except ourselves; but if we combine the system of guns in use abroad with our own smooth-bore cannon, we shall have batteries on board our ships with which no fault could be found.

In reading over some reports of experiments "on the penetration of armor-plates by steel shot," I find it asserted that the American fifteen-inch gun, charged with fifty pounds of powder and throwing a spherical steel shot of four hundred and eighty-four pounds, would fail to penetrate the Lord Warden's side ( $7\frac{1}{2}$  inches iron and 30 inches teak) at any range, while the nine-inch twelve-ton gun, with a forty-three-pound charge, would send its two-hundred-and-fifty-pound shot through her at a range of one thousand yards. It is also stated that the fifteen-inch gun would not penetrate the Warrior ( $4\frac{1}{2}$  inches iron and 18 inches teak backing) beyond a distance of five hundred yards, while the English seven-inch six-and-a-half-ton gun, weighing about one-third as much as the fifteen-inch gun, would do the same with a charge of twenty-two pounds of powder and one-hundred-and-fifteen-pound shot, and the twelve-ton gun would penetrate up to two thousand yards.

These facts are well understood by naval officers.

It was previous to the year 1869 that the Lord Warden and the Warrior were cited as above by way of comparison; but since that time great advances have been made in guns and armor, and in Captain Simpson's late report we find a thirty-five-ton twelve-inch, wrought-iron, muzzle-loading rifle-gun firing a shot of seven hundred pounds, with one hundred and ten pounds powder, perforating a fourteen-inch plate backed by eighteen inches of timber and one and a quarter inches iron skin, at five hundred yards; passing through twelve inches of solid iron, eighteen inches backing, and one and one-half inches iron skin up to seven hundred yards; up to two thousand yards, passing through eleven inches of iron, twelve of wood, one and a quarter inches iron skin, &c.; at thirty-one hundred yards, passing through ten inches iron, eighteen inches backing, and one and a quarter inches iron skin.

The twenty-five-ton eleven-inch muzzle-loading wrought-iron gun, with a shot of five hundred and thirty pounds and eighty-five pounds powder, perforates fourteen inches iron, eighteen inches backing, and one and a quarter inches iron skin up to five hundred yards; goes through twelve inches iron, eighteen inches backing, and one and a half inches iron skin, at six hundred yards; goes through eleven inches iron, twelve inches backing, and one and a quarter inches iron skin, at thirteen hundred yards; and through ten inches iron, eighteen inches backing, and one and a quarter inches iron skin, at nineteen hundred yards.

The ten-inch wrought-iron muzzle-loading gun of eighteen tons, with four-hundred-pound shot and seventy pounds powder, perforates within a fraction of fourteen inches iron, backed by eighteen inches teak and one and a quarter inches iron skin, at five hundred yards; goes through twelve inches iron, eighteen inches backing, and one and one-half inches iron skin at the same distance; perforates eleven inches iron, twelve



inches teak, and one and a quarter inches iron skin, at six hundred yards.

The nine-inch wrought-iron muzzle-loading gun of twelve tons, with fifty pounds powder and two-hundred-and-fifty-pound shot, perforates eleven inches iron, twelve inches wood backing, and one and a quarter inches iron skin, at six hundred yards, with seventy pounds powder and four-hundred-pound shot; goes through ten inches iron, eighteen inches backing, and one and a quarter inches iron skin, at one thousand yards.

The eight-inch wrought-iron muzzle-loading gun of nine tons, with thirty-five pounds powder and one-hundred-and-eighty-pound shot, goes through seven inches iron, twelve inches backing, and one and a half inches iron skin, at four hundred yards.

Thus it appears that any of the above guns, with the exception of the last mentioned, could destroy one of our eleven-inch turrets outside of nine hundred yards.

There are three guns now proposed to be constructed by Mr. Krupp, one of fourteen inches diameter of bore and fifty-seven and a half tons weight, one of fifteen and seven-tenths inches diameter of bore and eighty-two tons weight, and one of eighteen inches diameter and one hundred and twenty-four tons weight. What such guns will do against iron turrets, as at present constructed, it is easy to foresee.

So rapid is the march of improvement in ordnance, that every year finds us more helpless, and under the circumstances it would be as unjust to expect our Navy to succeed against such odds as it would to count on victory for our Army provided with smooth-bore artillery and old-fashioned muskets, against rifled field-pieces and Remington breech-loaders.

The American people are very exacting, and apt to show a good deal of feeling against those who sustain defeat, as I frequently noticed during the late civil war, without fully informing themselves of the disadvantages under which their combatants were laboring. The popular chagrin would be great, indeed, if we had our ships driven from the ocean in a war, and our ports hermetically sealed by a blockading force.

Under such circumstances our Navy would have great cause of complaint at being sent on a forlorn hope with guns and vessels built in or before 1860, to compete with guns and vessels built since 1870.

The Navy would not be to blame in such a case if it met with defeat, but it could very properly complain of not being supplied with means to gain victories and protect our coast and harbors.

To show the importance foreign powers attach to rifled cannon, I annex a list of guns now on hand in the British navy alone. I select these as belonging to the most prominent naval-power, all the others being armed in a similar manner.

BRITISH NAVY.

Return showing number of serviceable rifled guns December 31, 1873.

13-inch.....	2	Breech-screw .....	76
12-inch—			47
38 tons.....	4		
35 tons.....	13	Total number serviceable rifled guns..	268
25 tons.....	15		
	32	Number of guns supplied for iron-clad ships:	
11-inch.....	42	12-inch—	
10-inch.....	270	35 tons.....	1
9-inch.....	565	25 tons.....	1
8-inch.....	133	10-inch.....	4
7-inch—		9-inch.....	157
7 tons.....	139	8-inch.....	4
6½ tons.....	536	7-inch.....	24
90 cwt.....	16	Under manufacture for iron-clad ships:	
	691	12-inch, 38 tons.....	1
Breech-screw .....	881	11-inch.....	5



## TORPEDOES.

Since my last report I find that the subject of torpedo-warfare is attracting the greatest attention all over Europe, and much attention is paid to the sea-torpedo, or torpedo-vessels for accompanying a fleet or attacking outside a harbor.

The Germans are building twenty-eight sea-torpedo vessels, each one hundred and fifty feet in length between perpendiculars, which have been commenced since we undertook the construction of two. Experiments are also going on with the "fish-torpedo," which has been greatly improved during the past year, and is now being adopted by most European governments.

We have paid no attention to this device, and in so doing I think we have made a mistake, as the "fish-torpedo" seems to possess much merit, and would, no doubt, if properly managed, produce disastrous results to an enemy in a fleet-fight. One or two accidents created a want of confidence for a time in the "fish-torpedo," but these mishaps arose from mechanical difficulties which can be easily removed.

It is well for us to avail ourselves of all the improvements in warfare that are devised, for under different circumstances all may prove effective. The "fish," towing, Ericsson's, and Lay's torpedoes, all have good points, and their inventors should be encouraged.

All these devices could be combined in a torpedo-vessel carrying outriggers, and an opportunity might occur where each could be operated with advantage.

A torpedo-vessel should be ready to use the different inventions as circumstances might require, and should never be confined to one particular method. The fish-torpedo, and those of Ericsson and Lay, will require to be projected from a torpedo-vessel, or from land close to passing ships.

The Lay torpedo has been tested and approved. This invention, being charged with acids, would be more available if operated from shore in combination with batteries, especially if attacking a ship some distance off. It could also be used from a monitor-built vessel whose decks are close to the water.

The device is ingenious, and could, no doubt, be much improved, if Government would give the necessary encouragement.

I have examined the Ericsson torpedo, and think well of it, although I only know of the success of the experiments through officers who witnessed them.

This torpedo is simple and easily operated by means of compressed air and a steam air-pump, without danger to those engaged in working it. At close quarters it could be used with great effect, from any vessel, say at a distance of 100 feet, which is about as far as any torpedo could be advantageously employed from a ship at sea.

For a first experiment I think the Ericsson torpedo a great success. Whatever difficulties exist are merely mechanical and easily remedied, and the inventor should receive every encouragement from the Government, for these machines are too expensive for a private individual to construct unless he has assurances that the Government will liberally reward his ingenuity.

Both the Ericsson and Lay torpedoes are very valuable additions to the present means of torpedo warfare.

I still adhere to the opinion that torpedo-vessels with outriggers will prove the most efficient means of destroying ships.

It was so during our late war, when those badly-constructed and slow-

moving "Davids" caused consternation to vessels on blockade duty, and destroyed some of our finest ships.

No other kind of torpedo-vessel can break up a blockade or accompany a fleet outside, and I hope to demonstrate practically in a short time that the only outrigger torpedo-vessel that we have will be the most formidable afloat. It can be made serviceable under all circumstances.

While I attach great importance to the torpedo as a means of offense and defense, I am yet afraid that we will run into the error of supposing ships of war can be driven from the ocean by means of it alone. Some imaginative people think that ships and guns will avail nothing hereafter, but the torpedo will do all the work, while others, who have not paid much attention to the matter, consider the torpedo of little practical utility. Both these conclusions are erroneous.

The torpedo, after all, is but an adjunct, and there are certain times only when it would have advantage over great guns, as a Remington rifle or a Colt's revolver would, under certain circumstances, be preferable to cannon in a fort.

The torpedo, although an important addition to other means of warfare, will not do away with anything that has preceded it. Ships will only be built stronger and faster and guns heavier, while improvement will continue to be made in the torpedo and ingenious devices introduced to avoid it.

Our legislators must not delude themselves with the idea that the invention of the torpedo is going to decrease the expenses of the Navy. On the contrary, it calls for an increase to the extent that the torpedo may be required, and also for a corresponding increase in ships, heavy guns, and rams.

A people with an extensive coast, great commerce, and a habit of talking war, cannot avoid the responsibility of supplying their Navy with all the new inventions for conducting hostilities. They will find them all needed sooner or later.

Torpedo experiments, as we conduct them, are inexpensive, and I doubt if a dozen members of Congress have noticed the appropriation. The amount is so small; and I believe the Naval Committee were very favorably impressed with the torpedo establishment and the experiments conducted in their presence.

I think it would benefit the Navy if the results of the experiments at Newport were published immediately after they took place, and distributed to the service, for I think that our officers, with the exception of those stationed at the school, know less about what is going on than do those of foreign navies.

We are not so much in advance of the rest of the world that we need keep these torpedo matters secret, and there is always a way of getting at the truth if an outside person desires to obtain information. We often obtain books and plans from Europe which the originators thought perfectly secure in their own hands, and the same thing happens with regard to our own "secrets." A wiser plan would be to supply our officers with all results, impressing upon them the importance of not divulging such matters.

I am not quite sure, however, but that the wisest plan would be for belligerent nations to interchange their information in regard to destructive inventions. This would tend in a great measure to maintain the peace of the world, as I have always noticed two men, both armed to the teeth, when together are apt to be particularly civil to each other.

At this moment torpedo experiments on a large scale are being con-

ducted abroad, and I think it would be wise to keep several intelligent officers in Europe for the purpose of witnessing these performances. Foreign governments find it advisable to keep naval officers attached to their legations in the United States, where experiments are conducted on a much smaller scale.

#### A COMPARISON WITH FOREIGN NAVIES.

While we have been satisfied with our iron vessels built during the civil war, many of which proved worthless, the following is the result of the enterprise of foreign nations, who seem to vie with each other in the race of building iron-clads and casting heavy guns.

England has built and is building, since the introduction of iron-clads, fifty-five vessels, of 322,858 tons, iron-clads, armor-plated ships, and iron-plated gun-boats. France has built forty-four iron-cased vessels of all kinds, or 188,375 tons; Russia, twenty-four iron-plated vessels, or 67,000 tons; Italy, twenty-two, or 75,101 tons; Austria, nine, or 36,119 tons; Turkey, four, or 16,884 tons; Spain, eleven, or 42,000 tons; Sweden, five, or 5,100 tons; Denmark, six, or 10,836 tons; Holland, five, or ——— tons; Germany, eleven, or 63,776 tons; one hundred and ninety-six iron-clads, all told, to say nothing of Chili and Peru, which have a larger force of these vessels than the combined forces of all the foreign nations on their coasts.

The nation that seems to be advancing most rapidly in naval power is the German Empire, which, from having a very small force of vessels in 1869, has now a very respectable one, and in a few years will possess an iron-clad navy only inferior in size to those of England, France, and Russia.

This example of Germany shows how soon a navy can be built up with energy and determination, and the fact of her devoting so much attention to this matter will ultimately give her great weight in the councils of Europe, enabling her to carry out a policy in conflict with some of our most cherished ideas.

Germany has pursued a very sensible course for a power weak in naval resources.

She has commenced at once to build twenty-eight light and comparatively inexpensive torpedo-vessels while getting in order and increasing her fleet of iron-clads. Thus far she has made no mistakes in the construction of iron-clads, and I receive from Brazil a report of a beautiful steam-sloop, carrying the German flag, and a great improvement on modern vessels of war. Her battery is a model.

With her eleven iron-clads and twenty-eight torpedo-vessels, the German navy would be a match for an equal number of iron-clads of twice the size without torpedo-boats.

When Germany emerged from the late war with France she was not a naval power; but finding the necessity of becoming one to protect her coasts and commerce, she took immediate measures to increase her naval resources.

Germany has now appropriated \$72,000,000 for the purpose of building up a navy, so that in 1884 she will have about twenty-six iron-clads and rams of the heaviest tonnage; sixty swift clipper-steamers, averaging 1,500 tons, with heavy batteries; and thirty sea-going torpedo-vessels; leaving \$15,000,000 for docks and improvements in navy-yards and arsenals.

This is independent of the annual appropriations, and shows how

indispensable it is considered by a nation advancing in power and increasing in commerce to maintain a large force of war-vessels.

In the aggregate, \$72,000,000 seems a large sum; but when apportioned to the several years in which it is intended to complete the work, it appears like only a moderate expenditure.

We could afford it just as well as Germany, and we need an increase in our Navy more than any European power.

Six millions a year properly expended would in ten years put us in condition to resist encroachments, and to maintain our rights in any part of the world.

England has built but one torpedo-vessel, but the English, with their vast workshops, could turn out torpedo-boats faster than we could steam-launches. They are by no means indifferent to the importance of the sea-torpedo, and we must not form an unfavorable impression of torpedo-vessels because England has not done more in that direction.

The British have a number of quick-working iron gun-boats for harbor defense, that could soon be converted into torpedo-vessels.

We cannot afford to look idly on while all other nations are adding so rapidly to their naval resources. Every step they take leaves us so much more inferior to them, and we must finally lose that naval prestige of which we are justly proud, and abandon all claim to equality on an element quite as natural to our own people as to any sea-going nation.

While I am an advocate for the practice of naval tactics in large vessels, yet I think it would be better to commence with steam-launches at the Naval Academy, where not only the evolutions of fleets should be taught, but also the best system of attacking in torpedo-vessels and rams, to exhibit the confusion and difficulties incident to a battle.

The text-book in use at the Academy is well adapted for giving a general idea of the management of a fleet out of battle, but to manage an iron-clad fleet during an engagement a different system of tactics will be required.

In whatever manner a line of battle may be formed, it will be found that the ships will have to be arranged in groups of three; that is, three vessels forming a triangle and preserving that order as nearly as possible throughout a battle. Vessels in groups of three can support each other and preserve order better than by any other arrangement.

When a fleet is enveloped in smoke great uncertainty in regard to signals must exist; and, as I have said before, "at the commencement of a battle the responsibility of the admiral ends, and that of the commanding officer of ships commences." A long line of battle would soon be disarranged, but it would be possible to keep three vessels together in a triangular form where they could attack in concert and defend each other with certainty.

I invite attention to this subject, and trust it may be introduced into the study of naval tactics now taught to young officers.

There are several matters which I have mentioned in former reports, and to which I again beg leave to draw your attention.

1st. The apprentice system, which is necessary, if only to educate a set of good petty officers for the Navy. It seems rather inconsistent to provide such an excellent school for educating officers while doing nothing for the seamen.

In a few years more all the old stand-bys, the petty officers, will have disappeared from the Navy, and it is a question as to who will fill their places.

We require at least 1,000 boys in addition to the seamen, ordinary seamen, and landsmen now shipped for service, though 2,000 would be

better. These, educated and drilled on the plan I submitted to you in a former report, would, in the course of ten years, furnish petty officers, seamen, and ordinary seamen for the entire Navy.

On a late occasion, when it was necessary to fit out ships with dispatch, we had to enlist many inferior men, and the ships sailing in great haste, without time to properly drill their crews, were very inefficient as vessels of war.

I received letters from the several commanding officers at the time, and did not envy them the responsibilities they had incurred.

The entire expense of 1,000 boys would be, for pay, \$120,000; rations, \$108,000; total, \$228,000 per year; or, by reducing the number of ordinary seamen 700, we could maintain 1,500 boys at the rate of \$161,000 per annum. At the end of four years one-half these boys should be able to do thoroughly the duty of ordinary seamen, and after that time would add 750 ordinary seamen yearly to the Navy.

In twelve years the Navy would be manned entirely by American seamen.

2d. A more perfect method of ventilating ships is required. Imagine a crew of 250 men shut up at night on the berth-deck of a ship in the tropics, inhaling the foul air from the vessel and the fetid atmosphere of each other's breath. No wonder ships' crews contract epidemics which often decimate them.

I have examined a plan of ventilation devised by Assistant Engineer G. W. Baird, of which I highly approve, and I cannot do better than inclose his statement herewith.

3d. The introduction of steam-capstans into all ships of the Navy.

4th. Steam-cutters to be built with more buoyancy and more flare to the bow. These we have at present are wet in a sea-way and unsafe.

5th. Uniformity in boats' sails. This was at one time established, but at present the subject does not receive that attention which it merits. The plans furnished in 1869 were good and serviceable, and should be adhered to.

We have gone back to the use of the old lug-sail for boats, an unsightly and unserviceable arrangement; and commanding officers, unable to make it useful, rig their boats pretty much according to their own fancy.

The *Alarm* and the *Intrepid*. On the 28th ultimo I went on board the torpedo-vessel *Alarm* to witness the working of the "Fowler Steering Propeller," with which she is fitted.

For this purpose the vessel proceeded down New York Harbor to within a short distance of Sandy Hook. The trial was not for the purpose of testing the vessel's speed; the engines were not quite in condition, and as I had given only twenty-four hours' notice of my intention to make the trip, the engineer in charge did not think it advisable to work the engines up to full power. The trial was in every respect gratifying, and the performance of the vessel exceeded my expectations.

The working or manœuvring capacity of the *Alarm* is extraordinary, and I doubt if any vessel afloat can equal her in that respect. She worked up to eight knots, carrying only fifty pounds of steam, throttled off and all the furnace-doors wide open. When running at full power, the vessel is calculated to carry ninety pounds of steam, the boilers having been tested at one hundred and twenty pounds hydraulic pressure. With fifty pounds of steam she made forty-eight revolutions; with seventy-five pounds she would make about seventy-five revolutions. The *Catalpa*, a fast tug of 196 tons, making fifty turns, only kept way



with the Alarm, showing that there was very little difference in the power of the two propelling forces, the Alarm being 311 tons.

The model of this torpedo-vessel seems perfect, as she did not break the water on any part of the hull, or show anything more than a slight ripple astern, while running eight knots. While going at a speed of about seven knots the wheel was reversed, and in thirty-one seconds the vessel was moving in the opposite direction (astern) with nearly the same steam and speed, and working as well as when going ahead. While going about seven knots and making forty-five turns the wheel was put at right angles to the keel, when the vessel made a complete turn on her center in about 3' 30'', and she would turn even quicker than this with more revolutions. I noticed that an increase of about five turns above forty-five made a great difference in the speed of the Alarm, and without doubt when carrying all steam and making the full number of turns of which she is capable she will run over ten knots (or 11.5 miles) an hour.

The condition of the engines, however, was such that the engineer did not deem it safe to run them with power on that occasion. The journals heated considerably and there was a good deal of thumping of machinery, but all this will disappear when the engines are run for a short time.

I think the contractor has furnished the Alarm with a good pair of engines; the work appears to be well done throughout. On the whole I am pleased with the vessel, and am satisfied she will fulfill what is expected of her. She carries her fifteen-inch gun well, and could have been fitted to carry a twenty-inch gun, provided she did not have to encounter a heavy sea; this is remarkable in so small a vessel.

I also examined the Intrepid, and found her a good, strong vessel, having made considerable speed with full steam-power. She is rather heavy for a torpedo-vessel, not working so handily as is desirable for that purpose, and not being fitted with outrigger torpedoes, but she is an admirable ram, and with her weight and momentum when under way would sink any vessel with which she came in contact without injury to herself. She is well adapted to harbor-defense, and, perhaps, would do more damage to an enemy than a torpedo-vessel, the ram ranking higher than the torpedo in naval warfare. The Intrepid could easily be arranged to carry a fifteen-inch gun by taking out her mast and placing her pilot-house a little differently; in which event she would be a formidable vessel for harbor-defense.

In fact, for harbor and coast defense, I think both the above mentioned vessels will prove valuable additions to the Navy.

#### RECEIVING-SHIPS.

All the receiving-ships have been examined and found to be in the following condition:

New Hampshire, Captain Quackenbush, at Norfolk, Va. Very clean; regulations carried out; exercises of recruits at the guns; rigging too bad for exercises aloft; crew 80, including band; marines, 27; recruits on board, 1; fire-quarters, good; bottom, sound; upper works, rotten.

Sabine, at Portsmouth, N. H., Commander Irwin. Very clean; hull, good; upper works, rotten; regulations carried out; no recruits; has exercises when recruits are on board. Fire-quarters, good; crew, 47; marines, 25.

Ohio, at Boston, Captain Badger. Clean and in good order; bottom sound; all upper works rotten; decks very bad. No exercise aloft on account of state of rigging and spars. Regulations observed. Another ship should be provided. Crew, 73; marines, 23; fire-quarters, good.



Vermont, at New York, Captain Low. Clean and in good order; regulations observed. Ship not rigged. Hull tolerably sound. Fire arrangements good, except at low water they can use only four streams instead of five, which can be remedied by another connection with the supply-pipe on board. As the ship grounds at low water, the force-pump is useless at that time. Has no fire-extinguisher. Crew, 100; marines, 57; recruits, 125.

Potomac, at Philadelphia, Commander Pendergrast. Clean and in good order; regulations observed; rigging complete; exercise only at the mizzen-topsail. Fire-quarters good; bottom sound; upper works decayed. Has exercise of guns and small-arms. Crew, 28; marines, 24; recruits, 160. Ordered to be transferred to New York.

Relief, at Washington, Lieutenant Farenholt. Clean, good order; housed over; no exercise. Recruits, 8; crew, 22. Arrangements for fire good. Arrangements for health and comfort of recruits excellent on board all the receiving-ships.

All vessels going to sea have been carefully examined by the inspecting board, and found efficient in every particular.

The people of this country are so deeply immersed in business and politics that they give little attention to the necessities of a navy; while building up the industries of the country, they forget that these want protection on the high seas as well as on shore.

Our cities abound with policemen for the protection of property, but the high seas can scarcely be said to be policed by American ships of war, and but for the navies of foreign powers, the ocean would swarm with pirates.

Our citizens abroad are frequently obliged to go to the French or English admirals for protection, and in the Pacific Ocean our missionaries, who are doing much good in civilizing the savage islanders, have to depend almost entirely on foreign navies, as we have not ships to send among them.

Those familiar with the subject will admit that our Navy, small as it is, has performed its legitimate duties faithfully in the past, and that at present its officers are doing their best to keep up with the advance in professional knowledge.

From the foundation of our Navy, its officers have not only done their duty in war, but have in times of peace added largely to the geographical knowledge of the world, opened up commerce with the remotest countries, and by careful surveys made clear to our merchant-vessels the pathway across the ocean.

Compare their explorations with those of the most enterprising navigators of former times, and our officers will not suffer by the comparison. Many of the old voyagers left but meager accounts of their discoveries, while our explorations have always been conducted in such a manner as to benefit the whole human race.

Whatever romance may attach to the early navigators, they were in truth bold adventurers, pushing their frail barks into stormy seas, and in many cases leaving scarce a clew to the points they visited.

Our officers, with the hardihood of their predecessors, possess a knowledge of geodesy that has enabled them to determine with exactitude the position of every coast and hidden danger, and our charts are now in use by all commercial nations.

Everybody remembers the expedition under command of Lieutenant Wilkes, which visited all parts of the world, and made charts of every place it visited.

The expedition performed an amount of labor almost herculean, of which our merchant-ships are reaping the benefit at this day.

Commodore Perry, at the head of a naval squadron, opened to the world the commerce of Japan, which had been lost to it for centuries. The benefit of his action is seen by the increase of our commerce in that quarter of the globe, and by the multiplication of American mail-ships to China and Japan, which will finally be an assistance to us, though a small one, in time of war.

Our Navy has been active in the exploration of the Arctic and Antarctic Oceans, and the vast waters of the Pacific, and, in proportion to its size, has done more toward extending a knowledge of the physical geography of the land and sea than that of any other nation.

It is now, as it always has been, engaged in useful astronomical labors, and in long and dangerous voyages, and every portion of our country is interested in its maintenance.

When the small outlay for the support of the Navy is considered, it is unwise economy to withhold what is required to enable its officers to maintain the honor of the flag, and be ready to defend at all times our coasts and harbors against the depredations of an enemy.

Respectfully submitted.

DAVID D. PORTER, *Admiral.*

The Hon. SECRETARY OF THE NAVY.

*Report of Passed Assistant Engineer G. W. Baird on Ventilation.*

U. S. S. PENSACOLA, PAYTA, PERU.

*October 26, 1872.*

ADMIRAL: Since 1863, when the statistics of medical officers proved so conclusively that the "sick-list" of our monitors was less in proportion than on board the wooden ships, and the cause was simply *ventilation*, I have made the subject a special study, hoping by investigation, research, and inquiry to be able at some future day to devise the necessary apparatus for the best ventilation. I have carefully prepared a brief paper for you, which I inclose, hoping that you will accept it in the same spirit that I send it to you.

If you will be kind enough to read my paper you will see my plan is well founded, no portion of it being the result of idle fancy, but is deduced from the soundest laws and direct experiment. I have mentioned the subject to several of our naval constructors, but without success.

The apparatus I propose is certainly of small cost, and may be adapted to any or all ships.

I am, sir, very respectfully, your obedient servant,

G. W. BAIRD,  
*Second Assistant Engineer.*

VENTILATION.

When "hot-air" furnaces were first fitted to buildings, particularly the public buildings of the city of Washington, there was, of course, objection to them. There is always objection to anything new, though.

and a deaf ear was given by Architects and other professional men to the elderly clerks, who complained of headache and nausea from the artificially-heated air. These old gentlemen were, I remember well, at once called "Old Fogies," and the barbarous practice of hot-air ventilation was continued.

When the monitors were put in commission I observed, with no little interest, their mode of ventilation. It was a cold blast of natural air through the ships by means of Dempfel's blowers, run at a high velocity. The temperature in the engine and fire room often reached 160° F., but still the number of sick was proportionally less than on wooden ships, where it rarely reached 115°. The only reason any one dared ascribe to this was the superior ventilation.

At that time I happened to be attached to the Pensacola, in the West Gulf blockading squadron, a vessel whose machinery was designed as an experiment.

Behind the cylinders, which were horizontal, the thermometer stood steadily at 160°. A common lamp would not burn there five minutes. I had found this the case on other ships behind the engines, where the temperature was not more than 115°, and it had been decided, by older officers, that the atmosphere at that temperature was too rare to support combustion.

Inexperienced as I was, I was not prone to contradict flatly the statements of my superior officers, yet I was confident such was not the case. Sir Humphrey Davy had estimated the temperature of flame to be greater than the white heat of metals, and it was not likely that the rarity of these gases could be so great as to fail in supplying the flame of an oil-lamp.

There were two 15-foot Dempfel blowers kept running constantly while the engines were in operation, forcing immense volumes of air into the fire and engine rooms; but neither the temperature nor the quality of the gases was sensibly affected. There were subsequently two 10-inch ventilators erected, one behind each pair of the main cylinders, and running up 5 feet above the spar-deck. When trimmed face to the wind they made no reduction of temperature, at least noticeable on a thermometer, which was kept hanging on a bulk-head near; but when trimmed back to the wind, a strong blast of hot air ascended, carrying, of course, the noxious vapors that had banked up beneath them.

The cylinders being unjacketed, the passing currents of fresh air were rapidly heated, so that the reduction in temperature was not worth noting; but while in that position, a lamp could be kept burning in this hot place as well as on the gallery. From this experiment I deduced that the cause of the extinguishing of the lamp was not "the rarity of the atmosphere," but because it was not rich enough in oxygen.

The foul gases banked up in the close offices in Washington, heated and reheated by a hot, foul blast, and the aged clerks who "preferred the old grate-fires," immediately recurred to me. It was very plain now that they should experience ill-health under such trying circumstances. I was also delighted to find that a man could remain some time in that hot place, when the little chimneys were up, (for they were the opposite to what were termed ventilators,) whereas it was impossible to remain there five minutes at a time before that without fainting. This was very important to us, as the cut-offs on the outboard ends were continually becoming deranged, and required constant watching and adjusting. It was no longer disputed that life could be supported at those high temperatures, provided the atmosphere were kept pure. In New York City

there has recently been established a process for silvering the backs of mirrors, where the temperature is kept uniformly at about  $130^{\circ}$ , and the workmen are said to enjoy good health. The air to this apartment is supplied by a rotary blower, and passes through water previous to its admission into the room. The water serves to arrest all the dust, and absorbs the foreign gases contained in the air. This air is exhausted from the room by means of ordinary chimneys, which it enters through apertures near the floor.

Professor Leeds, in recent lectures at the Franklin Institute, has treated this subject very beautifully and learnedly. He has found, by analysis, that there are from 50 to 72 parts of carbonic gas in 10,000 in our school-rooms, lecture-rooms, and bed-rooms, but there is probably no public nor private room in any of our large cities where this poison gas is so great as on the berth-decks of our wooden vessels of war. To walk from the ward-room to the sick-bay (along the berth-deck) of this splendid ship (Pensacola) at night, will nauseate the halest officer on board.

Professor Leeds estimates "that the number of deaths in the United States last year (a year of profound peace) from poisonous gases, caused by illy-ventilated apartments, was greater than the entire number killed during the late war." If such is the condition on shore, what must be the suffering of our poor sailors?

The specific gravity of carbonic-acid gas is 1.524, a little more than one and a half times the weight of air, having the same tension and temperature. As soon as exhaled from our lungs, this gas has a tendency to fall to the ground at once, and were it not for its diffusion with the other gases present, it would gradually bank up and poison a whole apartment, but the hatches are left open, and fortunately part of it escapes after diffusion.

There are always currents of air through ships, whether the wind-sails are down or not, but these currents are sluggish, and before the heavy vapors can be raised to the hatches, the only escape, they diffuse with the air, and partially poison every current of it.

A strong current of fresh air will often give cold to men if blown upon them, particularly if it is directed upon their feet. I have often stood under a wind-sail, in the engine-room, in a dripping perspiration, without the slightest inconvenience so long as the air was blown upon my head, and never taking cold from it, but if my air-port is open at night, and a light draught is directed upon my feet, it always results in a cold.

What I propose is this: to place a flat tube, provided with small registers, on each side of the berth-deck, reaching from stem to stern, and produce a vacuum inside these tubes by an air-pump, the air-pump to be driven by a steam-engine. The exhaust steam from this engine could be turned into the distilling-apparatus, and collected as drinking-water for the crew.

The hatches being open for the admission of fresh air, a current of low velocity will be established, while all the heavy and moist gases will be at once drawn off and exhausted into the smoke-pipe, whence I propose to conduct the gases. This would assist materially in drying the deck. The registers upon the tube may be simple valves like the draught-doors upon a stove, and may be easily regulated. There may be one in each room, in the cabin, ward-room, and steerage, to be regulated to suit the fancy of each inmate.

Such an apparatus would not occupy any appreciable space, and its cost for a ship of the first class would not exceed (\$1,000) one thousand dollars, and it would cost nothing to run it, as the steam would be

exhausted into the distiller and saved for drinking and culinary purposes.

The life-time of the American seaman has been estimated by different authorities to be from nine to thirteen years, and a large percentage of the deaths can be traced directly to ill ventilation.

Very respectfully,

G. W. BAIRD.

Approved:

DAVID D. PORTER, *Admiral*.

15 N

○





# REPORT

OF

# THE POSTMASTER-GENERAL;

BEING PART OF

## THE MESSAGE AND DOCUMENTS

COMMUNICATED TO THE

## TWO HOUSES OF CONGRESS

AT THE

BEGINNING OF THE SECOND SESSION OF THE FORTY-THIRD CONGRESS.



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1874.



# CONTENTS.

---

## FINANCES.

	Page.
Financial condition.....	3
Estimates for 1876.....	4
Subsidies .....	4
Deficiency appropriations.....	4
Deficiency appropriations available ....	5
Net balance.....	5
Issues of postage-stamps, stamed envelopes, and postal cards .....	5
Increase in issues.....	5
Lost postage-stamps.....	6

## DEAD-LETTERS.

Dead-letters received, number of applications, &c.....	6
Amounts deposited in the Treasury.....	6

## REGISTERED LETTERS.

Increase in issues of registered packages .....	6
---	---

## CONTRACTS.

Transportation-statistics .....	7
Re-adjustment of pay on railroad-routes.....	8
Post-route-maps .....	10
Fines and deductions.....	10
Mail-bags, locks, and keys .....	11
Through mails .....	11
Mail depredations .....	12
Railway post-offices .....	12

## FOREIGN MAILS.

Statistics .....	12
Cost of mail-steamship-service.....	13
Expiration of contracts for European-mail-service.....	14
New arrangement, securing more frequent and rapid communication ....	14
Additional monthly service on China line.....	15
Steamers accepted for additional service, subject to future legislation .....	15
Relinquishment of service between the United States and the Hawaiian Islands.	15
Expiration of contract for steamship-service to Brazil.....	16
Convention with New South Wales.....	16
Exchange of postal cards with Switzerland.....	16
Convention with France.....	16
Additional article concluded with the Netherlands.....	17
Additional articles with Denmark.....	17
Convention with Japan ratified and postal agencies discontinued .....	17
International postal congress at Berne.....	17
A postal convention agreed upon.....	17
Its provisions.....	18

## APPOINTMENTS.

	Page.
Number of post-offices.....	19
Number of appointments.....	20
Cases acted on.....	20
Special, route, and local agents.....	20
Free-delivery system.....	20
Employés of the Post-Office Department.....	22

## POSTAL MONEY-ORDER SYSTEM.

Number of money-order offices.....	22
Issues and payments.....	23
Duplicate orders.....	23
Receipts and expenditures.....	24
Deposit of surplus funds.....	24
Orders improperly paid.....	25
Exchange of postal cards with Switzerland, Great Britain, and Germany .....	25

## MISCELLANEOUS.

Prepayment of postage on printed matter.....	26
Money-order business should be made self-sustaining.....	26
Increase of fees recommended.....	26
Rates of pay for railroad-mail-service.....	27
Appropriation for increased pay to railroads exhausted.....	28
Appropriate sphere of the Post-Office Department.....	28
Excess of expenditures over receipts.....	28
A policy of economy must be adopted and enforced.....	28

---

 CONTENTS OF APPENDIX.

No. 1. Estimates for expenditures for the fiscal year ending June 30, 1876.....	31
No. 2. Statement of payments made under sundry heads, charged to miscellaneous accounts, for the fiscal year ended June 30, 1874.....	51
No. 3. Estimate of indebtedness of Post-Office Department for fiscal year ended June 30, 1874, not yet adjusted.....	51
No. 4. Statement exhibiting receipts and expenditures, under appropriate heads, by quarters, for the fiscal year ended June 30, 1874, compared with the fiscal years ended June 30, 1873, and June 30, 1872.....	52
No. 5. Receipts and disbursements at Treasury depositories during the fiscal year ended June 30, 1874.....	54
No. 6. Receipts and disbursements at depository post-offices on account fiscal year ended June 30, 1874.....	56
No. 7. Postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards issued during the fiscal year ended June 30, 1874.....	58
No. 8. Postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards issued during the fiscal year ended June 30, 1874.....	61
No. 9. Statement of official postage-stamps and stamped envelopes furnished the several Executive Departments during the fiscal year ended June 30, 1874.....	63
No. 10. Statement showing the increase in the issue of postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards for the year ended June 30, 1874, over the preceding year, exclusive of the issue for official use.....	64

# CONTENTS.

v

	Page.
No. 11. Statement showing the increase in the issue of postage stamps, stamped envelopes, newspaper-wrappers, and postal cards, including issues for official use, for the year ended June 30, 1874, over the issues of the preceding year....	64
No. 12. Statement showing the number of dead-letters received and disposed of during the fiscal year ended June 30, 1874.....	65
No. 13. Comparative statement of the operations of the dead-letter office for the fiscal years from 1869 to 1874, inclusive.....	66
Letter of Second Assistant Postmaster-General referring to tables.....	67
A. Table of mail-service for the year ended June 30, 1874, as exhibited by the state of the arrangements at the close of the year.....	68
B. Railroad-service as in operation on the 30th of June, 1874.....	70
C. Steamboat-service as in operation on the 30th of June, 1874.....	102
D. Table showing the increase and decrease in mail-transportation and cost during the year ended June 30, 1874.....	106
E. Table showing the weight of the mails, the speed with which they are conveyed, the accommodations for mails and agents, the trips per week, and the rates of pay per mile per annum, on railroad-routes in the United States and Territories, the returns having been obtained with a view to the re-adjustment of the pay in accordance with the act of March 3, 1873.....	108
F. Table showing the re-adjustment, under the act of March 3, 1873, of the rates of pay per mile on certain railroad-routes and on certain new routes, the adjustment of the rates based upon returns of the weight of the mails, the speed with which they are conveyed, the accommodations provided for mails and agents, and the number of trips per week.....	154
G. Statement of the number, description, and cost of mail-bags and mail-catchers, purchased by contract and put into service during the fiscal year ended June 30, 1874, also the number and cost of mail locks and keys purchased and repaired during said year.....	184
H. Railway post-office lines in the United States, June 30, 1874, showing the increase in the service since June 30, 1873.....	185
Through-mail tables:	
1. Through mails to San Francisco from Washington.....	188
2. Through mails to Washington from San Francisco.....	188
3. Through mails to San Francisco from New York.....	189
4. Through mails to New York from San Francisco.....	189
5. Through mails to San Francisco from Boston.....	190
6. Through mails to Boston from San Francisco.....	190
7. Through mails to San Francisco from Cincinnati.....	191
8. Through mails to Cincinnati from San Francisco.....	191
9. Through mails to San Francisco from Chicago.....	192
10. Through mails to Chicago from San Francisco.....	192
11. Through mails to San Francisco from Saint Louis.....	193
12. Through mails to Saint Louis from San Francisco.....	193
13. Through mails to New Orleans from Washington.....	194
14. Through mails to Washington from New Orleans.....	194
15. Through mails to New Orleans from New York.....	195
16. Through mails to New York from New Orleans.....	196
17. Through mails to Memphis from New York.....	197
18. Through mails to New York from Memphis.....	198
19. Through mails to Cincinnati from Washington.....	199
20. Through mails to Washington from Cincinnati.....	199
21. Through mails to Cincinnati from New York.....	200
22. Through mails to New York from Cincinnati.....	200
23. Through mails to Saint Louis from Washington.....	201

Lost postage-stamps.

The number of packages of postage-stamps lost in transmission through the mails was two, valued at \$175; and of stamped envelopes, &c., one, valued at \$8.15. This is the smallest number of losses ever sustained during any year.

#### DEAD-LETTERS.

Dead-letters received; number of applications, &c.

A tabular statement appended to the report of the Third Assistant Postmaster-General fully sets forth the operations of the dead-letter division of that office during the past year, which may be summarized as follows: Number of domestic letters received, 4,348,473; number of foreign letters received, 253,300; total, 4,601,773—representing an actual or nominal value of \$4,637,429.08. Number of letters delivered, 1,392,224, representing \$3,909,868.46, (including 225,893 foreign letters returned, unopened, to the countries whence they came;) number filed for reclamation, 24,863, representing \$240,183.62; number at the close of the year either remaining not acted upon or outstanding in the hands of postmasters for delivery, 561,767, representing \$487,377; number which, containing circulars, or, failing in delivery and being worthless, were destroyed, 2,622,619. The number of applications for dead-letters was 6,420. In 2,140 of these cases the letters were found and properly delivered.

Amounts deposited in Treasury.

The amounts received during the year and deposited in the Treasury were—

From unclaimed dead-letters.....	\$3,721 00
From proceeds of sales of waste paper.....	4,240 14
From proceeds of sales of post-route maps.....	329 47
From proceeds of sales of old carpets, &c.....	215 11
<hr/>	
Total deposited during the year.....	13,545 72

#### REGISTERED LETTERS.

Increase in issues of registered packages.

The use of the registered-letter system by the public appears to be steadily increasing. The issues of registered packages to postmasters upon their requisitions during the past year were 30 per cent. greater than during the previous year. This increase is attributable in part to the reduction of the fee for registering domestic letters from 15 cents to 8 cents, which took effect on the 1st of January last, and in part to the increased care which the Department has given to the subject. It is not, however, practicable to present a detailed statement of the operations of this branch of the postal service, for the reason that the reports in reference to it from the post-offices throughout the country



have not been fully classified and recorded, owing to the want of sufficient clerical force to perform the work. Under careful management the registration system must grow into favor with the public, and, on account of the security afforded by it, eventually supersede the practice of transmitting money and other valuables through the ordinary mail.

#### CONTRACTS.

There were in the service of the Department on the 30th of June, 1874, 6,232 contractors for the transportation of the mails on public routes. <sup>Transportation statistics.</sup>

There were at the close of the year 2,142 "special" offices, each with a mail-carrier whose pay from the Department is not allowed to exceed the net postal yield of the office.

Of public mail-routes in operation there were 9,761, (of which 824 were railroad,) aggregating in length 269,097 miles; in annual transportation, 128,627,476 miles; in annual cost, \$15,402,057. Adding the increased expense which will result from the re-adjustment of the pay on railroad routes required by act of March 3, 1873, on routes from which the necessary returns were not received up to the close of the fiscal year, estimated at \$523,527, the annual cost will be \$15,925,584; and adding the compensation of railway post-office clerks, route-agents, mail-route messengers, local agents, and mail-messengers, amounting to \$2,781,902, the aggregate annual cost will be \$18,707,486.

The service was divided as follows:

Railroad routes: Length, 67,734 miles; annual transportation, 72,460,545 miles; annual cost, including \$523,527 for re-adjustment, as above, \$9,113,190—about 12.58 cents per mile.

Steamboat routes: Length, 18,369 miles; annual transportation, 4,078,725 miles; annual cost, \$839,004—about 20.57 cents per mile.

Other routes, upon which the mails are required to be conveyed with "celerity, certainty, and security:" Length, 182,994 miles; annual transportation, 52,088,206 miles; annual cost, \$5,973,390—about 11.47 cents per mile.

There was an increase over the preceding year in length of routes of 12,887 miles; in annual transportation, of 8,717,826 miles; and in cost, of \$1,766,716. Adding the increased cost for railway post-office clerks, route, local, and other agents, \$286,585, the total increase in cost was \$2,053,301.

The railroad routes have been increased in length 4,277 miles, and in cost \$1,332,467, against an increase last year

of 5,546 miles in length and \$754,425 in cost. This disproportionate increase in cost is owing to the re-adjustment of pay under the act of Congress approved March 3, 1873.

#### RE-ADJUSTMENT OF PAY ON RAILROAD ROUTES.

Re-adjustment  
of pay on railroad  
routes.

By act of Congress approved March 3, 1873, the Postmaster-General was "authorized and directed to re-adjust the compensation hereafter to be paid for the transportation of mails on railroad routes" upon conditions and at rates prescribed in the act. The principal consideration upon which the rates of pay were to be determined was the average weight of the mails, to be ascertained by an actual weighing for a number of successive working-days, not less than thirty, the law directing the weights to be taken "after June thirtieth, eighteen hundred and seventy-three," so as to avoid including therein the mass of free matter sent through the mails for the few months preceding the expiration of the franking privilege at the date named. A call had been made in February, 1873, upon the railroad companies in the New York and New England section for a weighing in March, 1873, with a view to the re-adjustment of their pay for the new contract-term commencing on the 1st of July of that year. The new act rendering the returns submitted under that call useless, another weighing was asked for, to commence October 1, 1873, not only in New York and New England, but throughout the country. This call was very generally responded to, and the results are exhibited in Table E in the appendix to this report. Upon the returns so submitted, the pay from July 1, 1873, has been re-adjusted upon 415 routes, of which the rates were increased on 327 and decreased on 88, the net result being an increase of \$1,254,327.46 in the amount of annual pay. To include in the re-adjustment the routes yet to be heard from, it is estimated that a further increase of \$344,021.54 will be necessary, making the whole amount \$1,598,349. The details of the re-adjustment are shown in Table F in the appendix, together with the adjustment of the pay on 52 new routes. The act authorizing the re-adjustment appropriated half a million of dollars, "or so much thereof as may be necessary," for the increase of pay which it was expected to occasion. Besides this specific sum, the regular appropriation for "inland transportation" may be regarded as including an allowance for the usual increase caused by the re-adjustment of pay on railroad routes, which had been in progress for a number of years before the passage of the act of March 3, 1873. The increase on this

account for 1872, as shown by the report for that year, amounted to \$354,865.94. The increase for 1873 was only \$223,823.55, but the falling off from the amount for the preceding year thus apparent resulted from the fact that in consequence of the passage of the act of March 3, 1873, the re-adjustment of pay on routes in the New York and New England section for the contract-term commencing July 1 of that year was postponed to await the receipt of the new returns required by that act. The cost of "inland transportation" for 1873 was  $8\frac{1}{2}$  per cent. more than for 1872. Adding the same percentage to the \$354,865.94 increase by re-adjustment for 1872, the increase for 1873, if it had been completed that year, would have amounted to \$385,029.54. The appropriation for "inland transportation" for 1874, apart from the half million specifically provided for the increase of compensation on railroad routes, was  $8\frac{5}{8}$  per cent. more than the cost for 1873. Adding this latter percentage to the \$385,029.54 to which the increase by re-adjustment for 1873 would have amounted, the usual increase for 1874 may be set down at \$419,040.48. Adding this sum to the \$500,000 specifically provided by the act of March 3, 1873, the whole amount applicable to the increase by re-adjustment, both specific and usual, for 1874 may be stated at \$919,040.48. But this amount falls short, by the sum of \$335,286.98, of covering the increase shown in Table F, and, adding the \$344,021.54 estimated to be necessary to include in the re-adjustment routes yet to be heard from, the whole deficiency, or, in other words, the whole excess of cost over the appropriations applicable to the case, will amount to \$679,308.52. This excess results from the fact that the weights of mails taken subsequently to June 30, 1873, as the basis for the re-adjustment, were much larger than the weights previously taken, upon which the estimates for the appropriations were based.

In 1867, the first year that mails were weighed, the largest weight carried on any road was 23,000 pounds, and there were about 340 miles of road transporting 20,000 pounds and upward. In 1874 the largest weight carried on any one road was 39,170 pounds, while on between 2,400 and 2,500 miles of road are transported 20,000 pounds and upward, and on over 1,000 miles of road are transported 30,000 pounds and upward.

In 1858 the average pay to railroads per mile was \$115.77; in 1867 it was \$112.08; in 1873 it was \$114.36; but in the mean time the bulk of mails had increased at least three-fold, and the space occupied on the cars was at least doubled.

The law of 1845 was so framed that the maximum pay allowed to any railroad was \$375 per mile. This maximum pay was given roads transporting 18,500 pounds of mail and over.

As shown above, the mails were continually increasing. Additional facilities were demanded, especially on roads where railway post-office service was established; in return no additional compensation could be given to railroads receiving the maximum pay, but roads receiving less than the maximum were allowed \$25 per mile per annum for furnishing postal-car facilities. That additional compensation could not be allowed to roads already receiving \$375 per mile was a just and growing cause of complaint on their part, and a serious source of embarrassment to this Department.

This the law of March 3, 1873, was intended to obviate. It was intended proportionately to compensate those railroads that were transporting more than the weight necessary to obtain the maximum compensation, so that in return the Department could obtain the additional facilities that were so imperatively demanded by the increasing mails.

#### POST-ROUTE MAPS.

Post-route  
maps.

The work of the topographer has been continued and extended. Besides two new editions during the year of all the maps hitherto issued, four sheets of a map of Arkansas and part of the Indian Territory have been finished and distributed, and sheets are completed, and will be issued at an early day, forming maps of Virginia and West Virginia, of North Carolina and South Carolina, of Alabama and Mississippi, and of Louisiana and Texas. Maps of the other Middle and Southern States will be prepared as early as practicable. Owing to the want of correct and systematic surveys in some of these States, greater difficulties will be encountered in compiling the maps, and delay may occur on that account.

#### FINES AND DEDUCTIONS.

Fines and de-  
ductions.

The amount of fines imposed upon contractors and deductions made from their pay for failures and other delinquencies, for the year, was \$72,149.42, and the amount remitted during the same period was \$8,524.21, leaving the net amount of fines and deductions \$63,625.21.

## MAIL BAGS, LOCKS, AND KEYS.

A table appended to this report exhibits in detail the number, description, and cost of mail-bags and mail-catchers, and of mail-locks and keys, purchased under contracts during the year. Of locked mail-bags (used for letters) there were 16,015, of tied mail-bags (used for printed matter) there were 60,556, and of mail-catchers (used for exchanging mails with postal cars under full speed) there were 400. The total cost of bags and catchers was \$124,903.75. The total cost of mail-locks and keys, including repairs, was \$31,962.39.

Mail bags, locks,  
and keys.

## THROUGH MAILS.

The usual through-mail tables, numbered from 1 to 32, are presented in the appendix. They show that for the year ending September 30, 1874, the average time to San Francisco from New York was 173 hours 32 minutes, against 179 hours 4 minutes the previous year—a gain of 5 hours 32 minutes; and to New York from San Francisco, 171 hours 1 minute, against 175 hours 28 minutes the previous year—a gain of 4 hours 27 minutes. The number of mails carried through westwardly between the same points in schedule-time this year was 597, and behind time 44, against 457 in time and 105 behind time last year; and eastwardly 327 in time and 38 behind time this year, against 235 in time and 130 behind time last year. Between Washington and New Orleans, mails were sent at the beginning of the year, in both directions, *via* Bristol, Knoxville, Cleveland, Dalton, Calera, Montgomery, and Mobile; in November, 1873, they were diverted, going south, so as to run, after passing Cleveland, *via* Grand Junction, and, going north, after passing Montgomery, *via* Atlanta; and in May, 1874, they were changed to run in both directions *via* Atlanta. The tables show the effect of these changes on the running-time, the average *via* Atlanta being the shortest. The average time going south this year was 78 hours 48 minutes, against 81 hours 45 minutes last year—a gain of 2 hours 57 minutes; and going north the average was 71 hours 3 minutes this year, against 72 hours 53 minutes last year—a gain of 1 hour 50 minutes. And on most of the other great through-mail routes there is a perceptible improvement both in speed and regularity, compared with the tables for the preceding year.

Through mails.

## MAIL-DEPREDACTIONS.

Mail-depreda-  
tions.

The number of recorded complaints for the past year of missing letters of value was 5,233, of which 2,040 were registered and 3,193 unregistered. The registered letters contained, as reported, in bonds, drafts, and currency, \$105,778.80, and the unregistered \$189,301.70. Of the registered letters, 915 were satisfactorily accounted for, 507 are reported as actually lost, and 618 cases are in the hands of special agents for investigation. During the year 285 persons were arrested for violations of the postal laws and regulations. Of these, 99 have been convicted, 15 have been acquitted, 5 escaped before trial, 2 forfeited bail, prosecution was abandoned in 38 cases, and 126 are awaiting trial.

## RAILWAY POST-OFFICES.

Railway post-  
offices.

A tabular statement hereto appended shows that the number of railway post-office lines in operation on the 30th June, 1874, was 63, extending over 16,414 miles of railroad and steamboat routes, an increase of 4 lines and 1,548 miles over the preceding year. The number of clerks employed was 850, at an annual cost of \$1,058,200, an increase of 98 clerks and \$117,200. Upon 13,271 miles the service is performed daily, upon 3,122 miles twice daily, and upon 21 miles four times daily, equivalent, in all, to 19,599 miles each way daily. Counting all the lines both ways, the aggregate service is 39,199 miles daily.

## FOREIGN MAILS.

Statistics

The total number of letters exchanged during the year with foreign countries was 28,579,045, an increase of 1,119,860 over the number reported for 1873. Of this number 14,885,989 were sent from, and 13,693,056 were received in, the United States.

The number of letters (single rates) exchanged in the United States and European mails was 19,967,042, an increase of 381,528 over the number reported for 1873.

The total postages on the letters exchanged with foreign countries amounted to \$2,054,803.81, an increase of \$33,492.95 over the amount reported for 1873.

The aggregate amount of postage (sea, inland, and foreign) on the letter-mails exchanged with the United Kingdom of Great Britain and Ireland, Germany, France, Belgium, the Netherlands, Switzerland, Italy, Denmark, and Sweden and Norway, was \$1,438,800.65, an increase of \$32,293.15



over the amount reported for 1873. The postages on letters sent exceeded the postages on letters received from the same countries in the sum of \$72,888.15, being 5.06 per cent. of the aggregate amount. The postages collected in the United States amounted to \$869,964.85, and in Europe to \$568,835.80, the excess of collections in the United States being \$301,129.05, or 20.9 per cent. of the entire postage-receipts on European correspondence.

Comparing the year 1874 with the year 1873, the rate of increase in the total number of letters exchanged with foreign countries was 4.1 per cent., and the rate of increase in the amount of postages thereon was 1.65 per cent. The increase in the number of letters exchanged with European countries was 1.95 per cent., and the increase of postages thereon amounted to 2.29 per cent.

The total weight of mails exchanged during the year with European countries was 1,935,303 pounds, (over 967 tons,) an increase of 109,906 pounds, (or 55 tons,) compared with the previous year. The weight of letter-correspondence was 404,237 pounds, and of printed matter and samples 1,531,066 pounds. The aggregate weight of mails sent to Europe was 946,911 pounds, and of mails received from Europe 988,392 pounds. The weight of letter-correspondence sent to Europe was 216,590 pounds, and of letter-correspondence received from Europe 187,647 pounds. The weight of printed matter and samples sent to Europe was 730,320 pounds, and of printed matter and samples received from Europe 800,746 pounds.

The cost of the United States transatlantic mail-steamship service for the year 1874 was \$235,373.81, being an increase of \$8,628.04 over the cost of the same service for the year 1873. The payments made to the respective steamship lines conveying mails to Europe, receiving the sea-postages as full compensation for the service, were as follows:

Cost of mail-steamship service.

The Hamburg-American Packet Company, for 51 trips from New York to Plymouth, Hamburg, and France.....	\$52,227 05
The North German Lloyd of Bremen, for 87 trips from New York to Southampton and Bremen, and 33 trips from Baltimore to Bremen.....	41,488 13
The Inman Line, for 4 trips from New York to Queenstown..	1,818 70
The White Star Line, for 55 trips from New York to Queenstown .....	40,709 86
The Liverpool and Great Western, (Williams and Guion Line,) for 50 trips from New York to Queenstown.....	58,276 83
The Cunard Line, for 25 trips from New York to Queenstown and Liverpool, and 54 trips from Boston to Queenstown and Liverpool.....	29,521 77

The Eagle Line, for 10 trips from New York to Plymouth, Cherbourg, and Hamburg.....	\$3,868 22
The Canadian Line, for 52 trips to Liverpool.....	6,731 33
The Red Star Line, for 14 trips from Philadelphia to Belgium .....	17 74
Steamers of Funch, Edye & Co., for 5 trips from New York to Norway.....	13 01
American Steamship Company, for 15 trips from Philadelphia to Queenstown.....	701 17
Total .....	235,373 81

The United States postages on mails conveyed to and from the West Indies, Panama, Central America, Brazil, Mexico, Bermuda, Nova Scotia, New Granada, Venezuela, and Ecuador amounted to \$141,650.53, and the cost of the sea-conveyance thereof was \$96,971.11. The United States postages on mails exchanged with Brazil, Japan and China, the Sandwich Islands, New Zealand, and Australia, by means of the subsidized lines of direct mail-steamers, amounted to \$53,550.88. The total cost of the United States ocean-mail steamship service for the year 1874 (including \$662,500 paid from special appropriation for steamship service to Japan and China, to Brazil, and to the Hawaiian Islands) was \$994,844.92.

Expiration of contracts for European mail service.

The contracts heretofore made with the various transatlantic steamship companies for the conveyance of the United States mails between New York and European ports at a compensation equal to the sea-postages on the mails conveyed, expired by limitation on the 31st December, 1873. Under them the mails were dispatched from New York on but three days in each week, viz, Wednesday, Thursday, and Saturday.

New arrangement, securing more frequent and rapid communication.

Since the expiration of the contracts in question a new arrangement, proposed by my predecessor and accepted by the steamship companies, has been put into successful and satisfactory operation. Under this arrangement, which went into operation January 1, 1874, the European mails are dispatched from New York on four days of the week, viz, Tuesday, Wednesday, Thursday, and Saturday, the several companies furnishing, in time for the publication thereof by this Department, prior to the first of each month, a schedule of the sailings of their steamers for the month, and also from time to time, when called upon therefor, the necessary data from the logs and general records of the steamers to enable the Department to select and designate the vessels which shall carry the mails for the ensuing month.

The advantages sought and secured by this arrangement are more frequent service and greater rapidity of mail communication with Europe without additional cost; and it would seem evident that the competition incited by the monthly selection by the Department of the best and fastest steamers, and the constant control and surveillance of the service which the arrangement secures to the Department, must result beneficially.

The contract for the additional monthly mail-service between San Francisco and Japan and China authorized by the act of Congress approved June 1, 1872, was, after advertisement, in accordance with the requirements of that act, awarded to the Pacific Mail Steamship Company of New York, at an annual compensation of \$500,000.

Additional  
monthly service  
on China line.

The company failing, however, to commence the additional service contracted for in such steamships, and at the time prescribed, both by the act of Congress cited above and the terms of their contract, when this Department was notified, in the month of July, 1874, nine months after the stipulated time, of the completion of two steamers built and designed for the service, it was deemed necessary to submit to the Attorney-General, for his opinion, the question of the company's right to have the new steamers inspected, and, if approved, accepted for the service under their contract.

The Attorney-General's decision, upon a full consideration of the case presented to him, having been to the effect that the contract with the company had not lapsed, but was in force, notwithstanding the failure to commence the service with the steamers and at the time provided, the steamers City of Peking and City of Tokio were inspected, as provided by the act of Congress of June 1, 1872, and, upon the favorable report of the Secretary of the Navy, were accepted by this Department for service under the contract with said company, with the understanding, however, that, as no appropriation was made by Congress at its last session for the additional monthly service contracted for, no payment could be made therefor until Congress should further legislate upon the subject.

Steamers accepted for the additional service, subject to future legislation.

This Department was notified, under date of 7th February, 1874, of the relinquishment of the mail-steamship service between the United States and the Hawaiian Islands authorized by act of Congress, approved March 2, 1867, which went into operation, under a contract with the "California, Oregon and Mexico Steamship Company," on the 5th of September, 1867, for a term of ten years, at a com-

Relinquishment of service between the United States and the Hawaiian Islands.

pensation of \$75,000 for twelve round trips per annum. No service has been performed under the contract referred to since the 18th September, 1873, the date of the last arrival at San Francisco of the steamer Costa Rica, of said line, with the United States mails from the Hawaiian Islands.

My immediate predecessor communicated the above facts to the Post-Office Committees of the Senate and House, at the last session of Congress, in compliance with a resolution of the Senate, and in connection therewith stated his reason for not exercising the power conferred upon the Postmaster-General in the contract for this service to annul the same for repeated failures, and referred the question of a continuance of the service to the action of Congress.

Expiration of  
contract for steam-  
ship service to  
Brazil.

The mail-steamship service to Brazil, authorized by act of Congress approved May 28, 1864, which went into operation September 30, 1865, under a contract with the United States and Brazil Mail-Steamship Company, will expire, by limitation of law and contract, on the 30th September, 1875.

Convention  
with New South  
Wales.

A postal convention has been concluded with New South Wales, establishing an exchange of correspondence with that colony by means of the direct line of colonial mail-packets plying between San Francisco and New South Wales, as well as by such other means of direct mail-steamship transportation as shall hereafter be established, with the approval of the respective Post Departments of the two countries. This convention, a copy of which is appended, went into operation on the 1st of February, 1874.

Exchange of  
postal cards with  
Switzerland.

An exchange of postal cards with Switzerland has been established, on the basis of a prepaid postage of two cents in full to destination in either country. A copy of the additional articles of agreement providing for this exchange, which went into effect on the 1st of May, 1874, is hereto appended.

Convention  
with France.

The negotiations for several years pending between this country and France for an amelioration of the postal intercourse between the two countries terminated on the 28th of April, 1874, by the conclusion of a postal convention, establishing a rate of postage of 9 cents per half ounce on prepaid letters sent from, or unpaid letters received in, the United States, and of 50 centimes per 10 grams on prepaid letters sent from, and unpaid letters received in, France. While this convention is not as liberal in its provisions as could be desired, it is the most satisfactory arrangement that could be effected with that government. This convention, a copy of which is appended, went into effect on the 1st of August, 1874.

An additional article to the postal convention of 26th September, 1867, and to the additional convention of 10-29 January, 1870, has been concluded with the Netherlands, establishing a direct exchange of correspondence with that kingdom at reduced postage-charges. This additional article, a copy of which is appended, was carried into operation on the 1st of October, 1874.

Additional article concluded with the Netherlands.

Additional articles of agreement have been concluded with Denmark, modifying certain provisions of the postal convention with that country for the regulation of postal intercourse with that kingdom, and of the detailed regulations and forms for the execution thereof. These additional articles, a copy of which is appended, will be carried into operation on the 1st of January, 1875.

Additional articles with Denmark.

The postal convention mentioned in the last annual report as having been formally agreed upon and executed with Japan was ratified on the 18th of April, 1874; and the government of Japan having given to this Department the notice required under article 21 of the convention, an order was issued by this Department for the discontinuance of the United States postal agencies at Kanagawa, (Yokohama,) Nagasaki, Hiogo, and Hakodadi, (Japan,) from January 1, 1875, the date upon which the said convention will go into effect. A copy of this convention is appended.

Convention with Japan ratified, and postal agencies discontinued.

#### INTERNATIONAL POSTAL CONGRESS.

The United States having been invited to take part in the international postal congress appointed to assemble at Berne, in Switzerland, on the 15th of September last, Mr. Blackfan, the Superintendent of Foreign Mails, was selected as the representative of this Department. His acknowledged ability and thorough acquaintance with the foreign and domestic mail-service of the country seemed to render his selection an eminently proper one. Mr. Rambusch, of the Office of Foreign Mails, was appointed to accompany him as an assistant. They reached Berne on the 18th of September. The congress had adjourned to the 21st of that month, and on that day, after a few remarks from the president of the congress, (M. Borel, Postmaster-General of Switzerland,) complimentary to the position of the United States on the question of postal reform, the gentlemen above named took their seats. Two sessions only had been held before their arrival.

International postal congress at Berne.

On the 7th of October an international postal convention was agreed upon and signed by the delegates from all the countries represented, with the exception of France, whose

A postal convention agreed upon.

representative decided to defer his signature until the approval of the National Assembly could be obtained. It is generally believed that France will eventually give her adherence to the convention, and, should she do so, all of Europe, Egypt, Asiatic Turkey, and the United States will be included in the proposed postal union.

The convention will, of course, have to be ratified according to the laws and usages of each country participating in it before its provisions can acquire the force of treaty obligations. If so ratified, it is proposed that it shall go into effect on the 1st of July, 1875.

Its provisions.

The provisions of the convention are too numerous to be stated in detail in this report; those of primary importance are :

That a uniform letter-rate of six cents may be established to all countries included in the postal union, which will greatly reduce the existing rates to all countries except Great Britain and Germany.

The total abolition of accounts for international correspondence. This will not only save the expenses incident to keeping such accounts, but it will add largely to our postal revenues, as we shall retain the large excess of foreign postage which is annually collected in the United States, and, under existing arrangements, accounted for and paid quarterly to the respective foreign offices.

The countries forming the union are to constitute a single postal territory for the exchange of correspondence between their post-offices.

The relations of the countries of the union to countries outside of it are to be regulated by such special conventions as exist or may be concluded between them ; and the rates of transport outside the limits of the union are to be settled by those conventions and added to the postage of the union.

The provisions of the convention are not to effect any alteration in the domestic postal legislation of any country, nor to restrict the right of the contracting parties to maintain and conclude treaties or to establish more restricted unions with the view of improvement of postal relations.

There is to be organized a central office, under the name of the International Bureau of the General Postal Union, which is to act under the supervision of the postal administration designated by the congress, and the expenses of which are to be paid by the contracting countries.

The liberty of transit through the entire territory of the postal union, and the right to send in transit through the in



intermediary countries, are guaranteed, as well for correspondence inclosed as in open mails, the sending-office to pay the transit country two francs per kilogram for distances under seven hundred and fifty kilometers, and four francs for longer distances. These rates, however, are not to apply to the transit across the territory of the United States between New York and San Francisco.

The convention, when ratified, is to continue in force for three years, and may be prolonged beyond that period; but any country may withdraw from the union on giving notice one year in advance.

It is believed that all essential points affecting the interests of this Department have been guarded in the convention, among which may be mentioned the right to collect our postage by our domestic standard of weight, the elevation of the single weight for printed matter to two ounces, and the right to allow newspapers to go at a single rate, provided they do not exceed the weight of four ounces.

It is not deemed proper to make any recommendation at this time in reference to the ratification of the convention by this country. Mr. Blackfan was authorized to affix his signature to it, on the part of the United States, subject to the approval of the President and the Postmaster-General. It is expected that he will return soon after, if not before, the opening of the approaching session of Congress, when such action will be taken in regard to the convention as the interests of the Government and the Department may render necessary.

Instructions were given to Mr. Blackfan to take advantage of his presence in Europe to visit the principal post departments, after the adjournment of the congress, and to examine into the improvements in postal arrangements and facilities which might be found in foreign systems, with a view of introducing into our service such of them as might be advantageously put into operation here. This will necessarily delay his return, but not, it is believed, beyond the time above mentioned.

#### APPOINTMENTS.

The report of the appointment-office shows the following:

		Number of post-offices.
Number of post-offices established during the year.....	2,318	
Number discontinued.....	1,268	
Increase .....	1,050	
Number in operation on June 30, 1873 .....	33,244	
Number in operation on June 30, 1874 .....	34,294	
Number filled by appointments of the President.....	1,408	
Number filled by appointments of the Postmaster-General .....	32,886	

Number of ap- Appointments were made during the year—  
pointments.

On resignations .....	5,354
On removals .....	967
On changes of names and sites .....	477
On deaths of postmasters .....	34
On establishment of new post-offices .....	2,314
Total appointments .....	9,424

Cases acted on. Number of cases acted on during the year..... 10,122

The number and aggregate compensation of special agents, route-agents, mail-route messengers, railway post-office clerks, and local agents in service during the year ended June 30, 1874, were—

Special, route, and local agents.	54 special agents * .....	\$165,475 63
	850 railway post-office clerks. ....	1,052,400 00
	936 route-agents .....	296,680 00
	211 mail-route messengers .....	136,540 00
	124 local agents.....	94,710 00
	2,175 Total .....	2,351,205 63

Free-delivery system. Under the act of March 3, 1873, making appropriations for the service of the Post-Office Department for the year ended June 30, 1874, and providing for the employment of letter-carriers for the free delivery of mail-matter “at every place containing a population of not less than twenty thousand within the delivery of its post-office,” the free-delivery system was established at thirty-nine offices.

The service was also largely extended in several of the principal cities. In and adjacent to Boston, thirteen post-offices, including three free-delivery offices, namely, Cambridge, Cambridgeport, and Charlestown, were discontinued, and twelve branch-offices established and placed under the control of the postmaster of Boston, and within the delivery of that office. The number of carriers was increased fifty-one, and the free-delivery system extended over the several localities formerly supplied by the discontinued offices. Five branch-offices were established in Chicago and placed under the control of that office, and the service extended, by the addition of thirty-three carriers, to meet the growth of the city and the increased demands of the service.

The post-offices of Williamsburgh (a free-delivery office) and Green Point, within the city of Brooklyn, were discontinued, and three branch-offices established and made a part of the postal system of that city. Twenty carriers were added to the force, and the delivery by carriers extended

\* Other special agents charged to separate appropriations.

over the localities formerly supplied by the discontinued offices.

In Saint Louis five post-offices were discontinued and three branch offices established and placed under the control of the postmaster of that city. Thirty-six carriers were added to the force, and the service extended over the city.

Sixty-four carriers were added to the force in New York, and thirty in Philadelphia. At the latter office twelve one-horse wagons were allowed, to convey the carriers from the office to their routes and return.

Other additions and improvements were made in the smaller cities, but of not sufficient importance to call for special mention in this place.

Experience has confirmed the wisdom of the policy of discontinuing the smaller offices in and adjacent to large cities and substituting branch-offices and placing them under the control of the principal office. This policy of consolidating deliveries into postal centers, and distributing the carriers between the main office and its branches, shortens the routes and expedites the deliveries and collections, and insures a more harmonious service than could be secured by several independent offices within the same territory.

The general results of the service at the eighty-seven offices, notwithstanding the large number of new offices and the irregularities necessarily incident to the introduction of the new system, show a gratifying increase over the preceding year.

The aggregate results were as follows :

Number of offices.....	87
Number of letter-carriers.....	2, 049
Mail-letters delivered.....	166, 020, 370
Mail postal cards delivered.....	11, 000, 809
Local letters delivered.....	45, 179, 295
Local postal cards delivered.....	8, 958, 106
Newspapers delivered.....	56, 468, 582
Letters collected.....	177, 898, 474
Postal cards collected.....	16, 298, 325
Newspapers collected.....	21, 562, 436
Total number of pieces handled.....	503, 386, 397
Amount paid carriers, including incidentals.....	\$1, 802, 696 41
Average cost per piece.....	3.58 mills.
Amount of postage on local matter.....	\$1, 611, 481 66

Showing the following increase, compared with last year :

Offices.....	39
Letter-carriers.....	550
Mail-letters delivered.....	25, 061, 483

## REPORT OF THE POSTMASTER-GENERAL.

Mail postal cards delivered .....	11, 000, 80
Local letters delivered .....	6, 839, 246
Local postal cards delivered .....	8, 958, 106
Newspapers delivered .....	13, 077, 917
Letters collected .....	40, 832, 775
Postal cards collected .....	16, 208, 325
Newspapers collected .....	6, 002, 000
Whole number of pieces handled .....	128, 470, 733
Amount paid carriers, including incidentals .....	\$380, 200 33
Postage on local matter .....	\$499, 230 45
Per centum of increase of receipts on local postage .....	44.7
Per centum of increase in cost of service .....	26.7

A full and detailed statement of the operations of the service at each office will be found in the appendix.

Employés of the  
Post-Office De-  
partment.

The following table shows the number of employés in the Post-Office Department; also the number of postmasters, contractors, clerks in post-offices, route-agents, railway post-office clerks, and other officers in service on the 30th June, 1873, and the 30th June, 1874, respectively.

## Departmental officers and employés:

	1873.	1874.
Postmaster-General .....	1	1
Assistant Postmasters-General .....	3	3
Superintendent of Foreign Mails .....	1	1
Superintendent of Money-Order System .....	1	1
Chief clerk to the Postmaster-General .....	1	1
Chief of Division of Dead Letters .....	1	1
Chief of Division of Depredations .....	..	1
Topographer for the Department .....	..	1
Chief clerks of bureaus .....	4	5
Disbursing officer and superintendent of building .....	..	1
Clerks, laborers, watchmen, &c .....	342	347
	<hr/> 354	<hr/> 354

## Other officers and agents:

	1873.	1874.
Postmasters .....	33, 244	34, 244
Contractors .....	5, 930	6, 222
Clerks in post-offices .....	4, 025	4, 227
Letter-carriers .....	1, 499	2, 040
Route-agents .....	862	862
Railway post-office clerks .....	752	800
Mail-route messengers .....	171	211
Local agents .....	110	124
Special agents .....	63	70
Total in service .....	<hr/> 47, 010	<hr/> 49, 000

## POSTAL MONEY-ORDER SYSTEM.

Number of  
money-order offi-  
ces.

Since the publication of the last annual report of the Postmaster-General, at which time there were 3,069 money-order post-offices in operation, 346 new offices have been established and 11 discontinued, making the present number

3,404. Of the additional offices, 15 were opened at sub-post-offices or stations in large cities.

The number of domestic money-orders issued during the last year was 4,420,633, the aggregate value of which was..... \$74,424,854 71

Issues and payments.

The number of such orders paid was 4,416,114, amounting in value to.. \$73,736,435 01

To which is to be added the amount of orders repaid to the remitters..... 473,721 24

Total of payments....., ..... 74,210,156 25

Excess of issues over payments..... 214,698 46

The fees received by postmasters for the issue of domestic money-orders amounted to \$461,382.30. A gain of \$16,908,638.02, or 29.4 per cent., in the amount of orders issued, of \$16,441,422.74, or 28.7 per cent., in the amount of orders paid, and of \$106,780.05, or 30.11 per cent., in the amount of fees received, is shown by these figures over the transactions of the previous year, as against a like gain in the business of 1873 over that of 1872 of 18.55 per cent. in issues, 18.33 per cent. in payments, and 1.23 per cent. in fees. During the last fiscal year the average amount of the money-orders issued was \$16.83½, a decrease of 30½ cents since 1873.

There were 16,979 duplicate money-orders issued during the year, of which 16,309 were in lieu of originals which were not received within a reasonable time by the respective payees, on account of change of residence or imperfect address, or which were claimed to have been lost in transmission by mail; 363 were issued for orders alleged to have been lost, and 61 for orders mutilated or destroyed while in possession of the remitter, payee, or indorsee; 14 were made payable to remitters, for orders obtained from them "by means of false or fraudulent pretenses, representations, or promises;" 29 were for orders destroyed by the burning of post-offices and mail-cars; 3 for orders lost by the robbery of a post-office; 178 on account of orders which became invalid because not presented for payment within one year after their issue; and 22 for orders which were invalidated in consequence of having received, contrary to law, more than one indorsement.

The number of duplicates issued last year was 2,458 greater than during the previous year, or 16.93 per cent., being less than the ratio of increase in orders issued by 12.47 per cent.

## REPORT OF THE POSTMASTER-GENERAL.

Receipts and ex-  
penditures.

The revenue-account of the domestic money-order system, as adjusted and reported by the Auditor, is as follows:

## Receipts:

Fees for money-orders issued.....	\$461,342 31
For premiums on drafts.....	56 24
Total .....	462,238 54

## Expenditures:

Commissions to postmasters and allowances for clerk-hire .....	\$321,789 06
Allowances to postmasters for remittances lost in transmission by mail.....	1,932 00
Defalcations of late postmasters.....	10,538 32
Incidental expenses .....	22,781 04
Total .....	357,040 42

Excess of receipts over expenditures..... 105,198 12

Deposit of sur-  
plus funds.

This amount of revenue is greater by \$36,614.12 than that of the 'previous year, an increase of 53.4 per cent. Surplus funds to the amount of \$54,253,147.44, derived from the issue of money-orders at the smaller post-offices, were deposited by them at the larger offices designated as their depositories. Such deposits are made in registered packages by mail when the postmaster is unable to obtain national-bank drafts, which is generally the case at small post-offices. Forty-nine cases of remittances, amounting to \$7,840.70, reported as lost in transmission, were under investigation during the year, nine of which, amounting to \$1,340, were pending at the close of the previous year, and four, amounting to \$450, were cases of loss during that year, but not brought to the notice of the Department until after the publication of the last annual report, making the reported losses of the last year \$6,500.70, being \$943.39 greater than those of the previous year. There was allowed \$1,932 of this amount to the credit of the postmasters by whom the remittances had been made; claims for credits on account of four remittances, amounting to \$550, were disallowed: in twelve cases the amount, \$1,203.70, was recovered by special agents; and twenty-two unsettled claims, amounting to \$4,155, are still pending. The postmaster at New York, N. Y., has paid drafts to the amount of \$6,034,575 of postmasters to whom credits with him were from time to time allowed on account of the excess of their payments over their issues of money-orders. In the Pacific States postmasters who required assistance in meeting their money-order payments have been furnished with funds to the amount of \$95,325 by the postmaster at San Francisco, Cal., and of \$26,233 by the postmaster at Portland, Oreg.



It was alleged that out of the whole number of orders paid, to wit, 4,416,114, the payment of 74 was effected fraudulently by forgery of the signature of the payee or indorsee, or by other unlawful or improper means, being at the rate of one erroneous payment in 59,677 payments. Orders improperly paid.

Ninety claims for re-imbursement on account of erroneously paid money-orders have been under consideration during the last year, sixteen of which occurred previously. In twenty-six of these claims the amount of the orders, being a total of \$615.41, was recovered by special agents and paid to the rightful owners; in twenty-nine, amounting to \$843.61, the paying postmasters were, after careful investigation, held responsible for the erroneous payments; in three cases the amount, \$80, was refunded by the Department, the paying postmaster not having been found at fault; in ten the amount, \$220.34, was, after due examination, found to have been improperly paid through negligence on the part of the remitters, payees, or indorsees, and the loss fell upon them; and twenty-two claims, amounting to \$596.75, are still unsettled.

The number of orders issued in this country on Switzerland during the last year was 2,721, amounting to \$72,287.28, and the number from that country paid here was 793, amounting to \$21,222.16, showing, in comparison with the previous year's business, a decrease of \$6,026.65, or 7.7 per cent., in the issues, and an increase of \$4,412.58, or 26½ per cent., in the payments. The fees received amounted to \$2,006.50, and the expenses to \$633.50. From the accompanying statement of the Auditor, it appears that, after the payment of all balances due Switzerland on the exchange of money-orders during the year, a net revenue of \$881.48 accrued to the United States. The number of orders issued in this country on the United Kingdom during the last year was 77,351, amounting to \$1,491,320.31, and the number from that country paid here was 15,992, amounting to \$303,773.66, showing, in comparison with the business of the previous year, an increase of \$126,843.99, or 9.3 per cent., in the issues, and \$88,686.05, or 41.23 per cent., in the payments. The fees received amounted to \$44,508.75, and the cost of commissions to postmasters, clerk-hire, incidental expenses, and miscellaneous items was \$21,562.71. The number of orders issued in this country on Germany during the last year was 32,542, amounting to \$701,634.73, and the number from that country paid here was 20,607, amounting to \$535,216.72. A comparison of these transactions with the amount of orders issued, viz, \$420,722.12, Exchange of postal orders with Switzerland, Great Britain, and Germany.

and of orders paid, viz, \$310,108.26, from the establishment of the German International Money-Order System, October 1, 1872, to the close of the fiscal year ended June 30, 1873, exhibits a large ratio of increase. The fees received amounted to \$19,288.95, and the cost of commissions to postmasters, clerk-hire, incidental expenses, and miscellaneous items was \$7,378.28. The Auditor has not the requisite data at present to enable him to furnish an exact statement of the revenue of the last fiscal year from the exchange of money-orders with Great Britain and Germany. That from the British business of the preceding year is reported by him at \$14,055.65, and that from the German business at \$7,795.23.

#### MISCELLANEOUS.

Prepayment of postage on printed matter.

By the act of Congress approved June 23, 1874, it is required that on and after the 1st January, 1875, postage on newspapers and periodical publications mailed from a known office of publication or news agency and addressed to regular subscribers or news agents shall be charged at the rate of two cents per pound if issued weekly or oftener, and at three cents per pound if issued less frequently than once a week. The act provides that the matter shall be weighed in bulk and prepaid with adhesive stamps to be specially devised for the purpose. The manner of applying the stamps is left discretionary with the Department, and a system, which it is hoped will work satisfactorily, has been devised for carrying the law into effect. The stamps are now in course of preparation, and will be ready at the time appointed for their use.

It is expected that the revenues of the Department from postage on printed matter will be increased by the enforcement of this act, notwithstanding that the rates are cheaper than before, as now the postage will be prepaid, while heretofore much loss has been occasioned to the Department on account of the non-collection of postage at the point of delivery.

Money-order business should be made self-sustaining.

The money-order business of this Department appears to be rapidly growing in public favor, and is undoubtedly a very great accommodation to a large number of persons who are not within the reach of banking facilities, or who are unaccustomed to the use of them. Yet I see no reason why this branch of the service should not be made self-sustaining.

Increase of fees recommended.

The apparent profits of the money-order system during the last year are about \$105,000, while certain expenses

to the amount of \$182,000, for clerk-hire and stationery in the Post-Office Department and the Auditor's Office, and for money-order blanks in post-offices, are not charged to the money-order business, but are paid out of appropriations, so that while the money-order system appears to yield a revenue of \$105,000, there is, in fact, a deficit of \$77,000. I suggest, therefore, that the fees for money-orders be increased, in accordance with the views of the Superintendent submitted herewith, (see appendix,) so that the money-order system shall, like any other business, be made to defray all its own expenses.

The number and length of mail-routes in the United States require an expenditure for transportation which dwarfs into insignificance the cost of similar service in other countries. For the year ending June 30, 1876, it is estimated that this item alone will exceed \$18,000,000. The portion to be paid to railroads will amount to more than \$10,000,000.

Rates of pay for  
railroad mail-service.

Opinions have differed widely as to the best method of determining the rightful rates of compensation to be paid to railroads for services rendered to this Department. Heretofore their pay has been based on the weight of mails, with an additional allowance on certain thoroughfares for providing postal cars. At present the matter is in a very unsatisfactory condition, and some equitable mode of adjustment should be at once devised, and sanctioned by law.

Some of the roads have represented to the Department that the carrying of the mails was little or no object to them, because the express companies were willing to pay much more for the accommodations furnished than the Department would allow. On the other hand, representatives of the leading express companies have contended that the act which took effect July 1, 1874, permitting the transmission by mail of packages of merchandise weighing not over four pounds, at the rate of one cent for each two ounces, is taking away the most profitable part of their business, and will soon render them unable to meet the heavy rentals demanded by the roads. Thus is presented a curious anomaly—the roads claiming that the Government does not pay as much as the express companies are ready to pay, and the express companies claiming, on the other hand, that the law is effecting such a diminution of their revenues that they are unable to accede to the demands of the roads. I find no disposition on the part of any railroad or transportation company to deal otherwise with the Department than in a spirit of fairness and justice. I trust that Congress will adopt some equitable plan of adjustment which will not be too burden-

some to the Government, and which will be satisfactory to the companies.

Appropriation  
for increased pay  
to railroads ex-  
hausted.

The act of March 3, 1873, re-adjusting the pay of railroads on the basis of weight of mails carried, added much more largely than was anticipated to the expenses of the Department. The appropriation for that purpose having become exhausted, I have declined to make further payments.

Appropriate  
sphere of the Post-  
Office Depart-  
ment.

I would suggest that the time has come when a resolute effort should be made to determine how far the Post-Office Department can properly go in its efforts to accommodate the public, without trespassing unwarrantably upon the sphere of private enterprise. There must be a limit to governmental interference, and, happily, it better suits the genius of the American people to help themselves than to depend on the state. To communicate intelligence and disseminate information are the primary functions of this Department. Any divergence from the legitimate sphere of its operations tends to disturb the just rule that, in the ordinary business of life, the recipient of a benefit is the proper party to pay for it, since there is no escape from the universal law that every service must, in some way, be paid for by some one. Moreover, in a country of vast extent, like ours, where most of the operations of the Department are carried on remote from the controlling center, the disposition to engage in lateral enterprises, more or less foreign to the theory of the system, may lead to embarrassments whence extrication would be difficult.

Excess of expen-  
ditures over re-  
ceipts.

For years the franking privilege was an incubus on the Department and an obstacle to efficient postal reform. Its abolition, for which we are largely indebted to the resolution and wisdom of my predecessor, opens the way for other measures which have yet to be inaugurated and pressed to a successful issue before the Department can become self-sustaining. While I do not flatter myself that I shall be able to accomplish this most desirable end during the short period of my service, I propose to keep it steadily in view, and to direct my best efforts toward its attainment. For the first time in the course of a life devoted actively to business, I find myself in charge of an establishment the expenditures of which largely exceed its receipts—a state of affairs which strikes with peculiar force a mind more or less disciplined by that close inspection of accounts enforced in mercantile pursuits. In ordinary business affairs there is but one end to this condition of things—bankruptcy.

A policy of eco-  
nomy must be  
adopted and en-  
forced.

The deficiency of this Department has varied of late years from 15 to 20 per cent., while from the best data at my

command I have been compelled to submit estimates for the year ending June 30, 1876, which will show an expected excess of expenditures over receipts of nearly \$8,000,000, or about 25 per cent. of the entire revenues of the Department. How far the American people will be willing to go in this direction remains to be seen. The difficulties in the way of adopting and enforcing a policy of economy, which, while properly guarding the revenues of the Department, shall also afford to the new and growing portions of our country the mail facilities to which the enterprise of the people entitles them, are neither few nor small; but in some way they can and must be surmounted.

I deem it suitable to say here that I propose to guard with strict vigilance the expenditures of this Department, sanctioning no outlay which can be avoided without detriment to the service, and so to conduct its affairs generally that the interests of the public shall be paramount to those of any individual, corporation, or party.

Very respectfully, your obedient servant,

MARSHALL JEWELL,

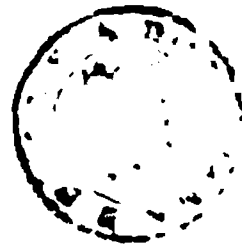
*Postmaster-General.*

The PRESIDENT.





# APPENDIX.



## No. 1.—*Estimates for expenditures for the fiscal year ending June 30, 1876.*

### FIRST ASSISTANT POSTMASTER-GENERAL.

For compensation to postmasters.....	\$7,000,000 00
For clerks in post-offices.....	3,500,000 00
For payments to letter-carriers.....	2,100,000 00
For wrapping-paper.....	25,000 00
For wrapping-twine.....	55,000 00
For marking and rating stamps.....	10,000 00
For letter-balances.....	10,000 00
For rent of post-offices.....	300,000 00
For fuel.....	140,000 00
For light.....	140,000 00
For stationery, miscellaneous and incidental items.....	150,000 00

Total for First Assistant's Bureau..... \$13,430,000 00

### SECOND ASSISTANT POSTMASTER-GENERAL.

For inland transportation.....	\$18,062,796 00
For railway postal clerks.....	1,257,141 00
For route-agents.....	1,034,982 00
For mail-route messengers.....	160,000 00
For local agents.....	115,000 00
For mail-messengers.....	715,000 00
For mail depredations and special agents.....	175,000 00
For mail-locks and keys.....	30,000 00
For mail-bags and mail-bag catchers.....	210,000 00
For preparation and publication of post-route maps.....	35,000 00

Total for Second Assistant's Bureau..... 21,844,919 00

### THIRD ASSISTANT POSTMASTER-GENERAL.

For postage-stamps.....	\$149,764 00
For expenses of agency.....	6,900 00
For stamped envelopes and newspaper-wrap- pers.....	446,520 00
For expenses of agency.....	14,095 00
For postal cards.....	159,806 00
For expenses of agency.....	5,600 00
	<hr/>
	\$782,685 00
For advertising.....	115,000 00
For registered-package envelopes, locks, and seals.....	65,620 00
For office envelopes.....	66,560 00
For dead-letter envelopes.....	3,750 00
For ship, steamboat, and way letters.....	7,500 00
For office furniture.....	35,000 00
For fees to United States attorneys, marshals, clerks of courts, and counsel necessarily employed by special agents of Post-Office Department, subject to approval by the Attorney-General.....	7,500 00
For engraving, printing, and binding drafts and warrants.....	3,000 00
For miscellaneous items.....	2,500 00

Total for Third Assistant's Bureau..... 1,089,115 00

## SUPERINTENDENT OF FOREIGN MAILS.

For transportation of foreign mails.....	\$300,000 00	
For balances due foreign countries.....	300,000 00	
Total .....		\$600,000 00
Grand total estimate for expenditures.....		36,964,034 00
Estimated amount provided by the Department from its own revenue, accruing from postage and other sources.....		29,148,150 00
Amount to be provided from the general Treasury to make the receipts equal the expenditures, (deficiency).....		7,815,884 00
Expenditures under special appropriations to be pro- vided out of the general Treasury:		
For mail-steamship service between San Francisco, Japan, and China .....	\$1,000,000 00	
For mail-steamship service between United States and Brazil .....	37,500 00	
For mail-steamship service between San Francisco and Sandwich Islands.....	75,000 00	
Total.....		1,112,500 00
For official postage-stamps for use during the fiscal year.....		986,000 00
Total to be provided from general Treasury.....		9,914,378 00

EDWARD W. BARBER,  
Third Assistant Postmaster-General.

POST-OFFICE DEPARTMENT,  
APPOINTMENT OFFICE,  
Washington, D. C., October 30, 1874.

SIR: Accompanying this I have the honor to submit a statement of the estimated expenditures for the items named during the fiscal year ending June 30, 1876.

The estimate for compensation to postmasters is made at \$7,000,000, being an increase of \$500,000 over the amount appropriated for the year ending June 30, 1875, or an increase of 7.7 per centum, against 13.53 per centum for said year.

This increase is deemed necessary because the fourth-class offices (a very large class, constantly increasing in number and business) will, under the law of last session, receive their compensation by quarterly adjustments from commissions and box-rents in accordance with the amount of business done, so that the increase will appear in each year's outlay, instead of biennially as under the former law adjusting the salaries for such offices every two years. It is, therefore, apparent that this item of appropriation must increase in proportion as the revenues of the Department increase.

The estimated amount required for the free-delivery service for the fiscal year ending June 30, 1876, is \$2,100,000. This sum is rendered necessary by the growth of the service and its probable extension under the act approved June 23, 1874, entitled "An act making appropriations for the service of the Post-Office Department for the fiscal year ending June 30, 1875, and for other purposes," which authorizes the employment of letter-carriers in cities and towns having a population of not less than 30,000 within their corporate limits.

The amount expended for the free-delivery service, including incidental expenses, for the year ended June 30, 1874, as reported by the Auditor for this Department, was \$1,802,696.41; and the amount asked for, viz, \$2,100,000, is an excess of \$297,303.59 over the expenditures of last year, and \$200,000 over the appropriation for the year ending June 30, 1875.

This estimate is not considered too large, in view of the probable demands of the service for the year ending June 30, 1876, provided the policy indicated in the general order of the Postmaster-General, of September 22, 1874, is carried out.

The estimate for clerks in post-offices is placed at an increase of \$250,000 over the year ending June 30, 1875, being 7.7 per centum against 14.28 per centum of said year, and made necessary by the growth of the service.

The estimate for wrapping-paper shows a decrease of 7.4 per centum, while the amount asked for wrapping-twine shows an increase of 14.6 per centum over the preceding year.

The estimate for marking and canceling stamps, letter-balances, rent, fuel, and light for post-offices, stationery, miscellaneous and incidental expenses, is made necessary by the requirement to provide for the rapid extension of the service.

The total amount asked for is \$13,430,000.

Accompanying this communication is a tabular statement, marked A, giving more definite information:

Very respectfully,

J. W. MARSHALL,  
*First Assistant Postmaster-General.*

Hon. E. W. BARBER,  
*Third Assistant Postmaster-General.*

3 P M G

## REPORT OF THE POSTMASTER-GENERAL

A.—Comparative statement showing the estimate, the appropriation, and the expenditure for the items named below for the fiscal year ended June 30, 1874, with the per centum of increase or decrease of expenditures, with estimates for the same during that period; also the amounts appropriated for the several items for the fiscal year ending June 30, 1875, with the per centum of increase or decrease of the same compared with the expenditures of the previous fiscal year, together with the estimates for the same items for the year ending June 30, 1876, with the per centum of increase or decrease for the same compared with the appropriation for the fiscal year ending June 30, 1875.

Items.	Estimate for the fiscal year ended June 30, 1874.	Appropriation for the fiscal year ended June 30, 1874.	Expended during the fiscal year ended June 30, 1874.	Per centum of increase or decrease of expenditures over estimates for 1874.		Appropriation for the fiscal year ending June 30, 1875.	Per centum of increase or decrease over expenditures for the fiscal year ended June 30, 1874.		Estimate for the fiscal year ending June 30, 1876.	Per centum of increase or decrease over appropriation for the fiscal year ending June 30, 1875.	
				Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
For compensation to postmasters .....	\$5,700,000	\$5,725,000	\$5,818,472 17	2+	.....	\$6,500,000	11.7	.....	\$7,000,000	7.7	.....
For clerks in post-offices .....	3,000,000	2,975,000	3,297,961 77	10—	.....	3,250,000	.....	1.4	3,500,000	7.7	.....
For payments to letter-carriers .....	1,600,000	1,700,000	1,802,418 68	12.7	.....	1,900,000	5.4	.....	2,100,000	10.5	.....
For wrapping-paper .....	33,000	33,000	20,200 00	.....	38.7	27,000	33.6	.....	25,000	.....	7.4
For twine .....	38,000	38,000	49,574 50	30.4	.....	48,000	.....	3.2	55,000	14.6	.....
For marking and canceling stamps .....	12,000	12,000	7,953 54	.....	33.7	9,000	13.2	.....	10,000	11.1	.....
For letter-balances .....	3,000	3,000	4,749 80	58.3	.....	3,000	.....	36.8	10,000	233+	.....
For rent for post-offices* .....	300,000	300,000	515,270 94	.....	20.7	720,000	39.7	.....	730,000	1.4	.....
For fuel for post-offices* .....	130,000	130,000									
For lights for post-offices* .....	160,000	160,000									
For stationery and miscellaneous items* .....	60,000	60,000									
Total .....	11,036,000	11,136,000	11,516,601 50	4.35	.....	12,457,000	8.15	.....	13,430,000	7.8	.....

\* Paid as one item.

APPOINTMENT-OFFICE, Post-Office Department, October 30, 1874.

POST-OFFICE DEPARTMENT,  
OFFICE OF THE SECOND ASSISTANT POSTMASTER-GENERAL,  
*Washington, D. C., October 5, 1874.*

DEAR SIR: I beg leave to submit herewith estimates of the amounts of money which it will be necessary to appropriate for inland mail transportation and items incident thereto for the fiscal year ending June 30, 1876.

The amounts are stated in tabular form, in comparison with the cost of the service at the end of each of the fiscal years 1872, 1873, and 1874, the latter including an estimate of the additional expense which the re-adjustment of the pay on railroad routes required by act of March 3, 1873, will occasion on routes from which the necessary returns were not received up to the close of the year, with the appropriation for 1875, and with an estimate of the expense for 1875, which, for inland transportation, on the basis of 7 per cent. increase on the cost for 1874, will exceed the amount appropriated by the sum of \$640,374. The increase of the cost of inland transportation for 1873 over 1872 appears by the table to be 8.45 per cent.; and for 1874 over 1873, 16.79 per cent. This disproportionate increase for that single year, 1874, results from the re-adjustment, made and to be made, of the rates of pay on railroad routes under the act of March 3, 1873, the increase on railroad routes amounting to 25.57 per cent. over the cost for 1873, while the increase on other land-routes is only 7.07 per cent. over the cost for 1873. The appropriation for 1874 contained an allowance of \$500,000, specifically, for the increase which the re-adjustment would occasion. As, however, the regular appropriation for "inland transportation" included an allowance for the usual increase of expense caused by the re-adjustment of pay on railroad-routes made for several years prior to the passage of the act of March 3, 1873, and the increase for 1872 amounted to \$354,865.94, the increase for 1873, if the re-adjustment on routes in the New York and New England section for the contract-term commencing on the first of July of that year had not been postponed to await the receipt of the new returns required by the act of March 3, 1873, would have amounted, at the rate of advance in the cost of inland transportation for the same period, namely,  $8\frac{1}{2}$  per cent., to \$385,029.54. The appropriation for "inland transportation" for 1874, apart from the half million provided expressly for the re-adjustment under the act of March 3, 1873, was at the rate of  $8\frac{5}{8}$  per cent. advance on the cost for 1873; and, adding this rate to the \$385,029.54, to which the usual increase by re-adjustment for that year would have amounted, the usual increase for 1874 may be set down at \$419,040.48. Adding this to the \$500,000 specifically provided by the act of March 3, 1873, the whole amount applicable to the increase by re-adjustment, both specific and usual, for 1874, may be stated at \$919,040.48; but this sum falls short by \$679,308.52 of the amount necessary, as the increase caused by the re-adjustment which the act requires will amount to \$1,598,349, the weights of the mails taken subsequently to June 30, 1873, as the basis for the re-adjustment, being largely in excess of any weights previously taken, and thus swelling the increase far beyond the estimates, which were cast upon the previous weights. The cost for 1875, allowing therefor an increase of 7 per cent. on the cost for 1874, will amount to \$17,040,374. The estimate for 1876 is \$18,062,796, being cast upon an allowance of only 6 per cent. increase on the estimated cost for 1875. This is 2.45 per cent. less than the increase for 1873 over 1872, and 1 per cent. less than the estimated cost for 1875 over that for 1874. The increase for 1874 over 1873 was exceptionally large, for the reason above stated.

The increase of expense for railway post-office clerks in 1873 over

1872 was 14.53 per cent.; for 1874 over 1873, 12.40 per cent.; and for 1875, as estimated, over 1874, 10 per cent. The estimate for 1876 is only 8 per cent. over the cost for 1875.

The increase of expense for route-agents in 1873 over 1872 was 12.25 per cent.; for 1874 over 1873, 8.96 per cent.; for 1875, as estimated, over 1874, 10 per cent. The estimate for 1876, \$1,084,982, is 10 per cent. over that for 1875. On this item, the expense for 1875, as estimated, is \$986,348, against an appropriation of only \$929,035, leaving a deficiency of \$57,313.

On the items for mail-route messengers, local agents, and mail-messengers, the estimates for 1876 amount to \$990,000, an increase of 5.98 per cent. over the estimated cost for 1875, which is \$934,070, and of 8.32 per cent. over the appropriation for 1875, which, being only \$913,916, is \$20,154 less than the estimated cost.

Compared with the actual cost for these three items for 1874, which was \$827,022, the estimate for 1876 is an increase of 19.70 per cent., which is less than an average of 10 per cent. for each of the years 1875 and 1876, against an increase of 28.01 per cent. for 1874 over 1872, of 13.90 per cent. for 1874 over 1873, and of 12.38 per cent. for 1873 over 1872.

The estimate for mail-depredations and special agents for 1876 is \$175,000. This is \$15,000 more than the appropriation for 1875; but that appropriation is insufficient to maintain the present force, of which a reduction will consequently be necessary, to the damage of the service, as it is feared, in view of its rapid expansion and the increased supervision of every branch required on that account.

For mail-locks and keys, the estimate for 1876 is placed at \$30,000. This is \$20,000 less than the amount appropriated for the current year; but such a reduction is deemed practicable because the entire service will have been fully equipped by the close of this year with new locks and keys, so that it will then only be necessary to provide for wear and tear and for the natural growth of the service.

An appropriation of \$200,000 for mail-bags and mail-catchers was asked for last year. The amount appropriated, however, was only \$180,000. The cost for 1874 was \$201,178.64. The estimate for 1876 is \$210,000, which amount, in view of the continual extensions and improvements of the mail-service, especially on railroad-routes, is deemed indispensable.

An appropriation of \$35,000 was asked for last year for the preparation and publication of post-route maps, that amount being intended to cover the additional expense necessary for the reproduction by lithography of manuscript maps of the new States and Territories. The sum appropriated was only \$30,000; but the estimate for 1876 is placed again at \$35,000, \$5,000 of the amount being intended for the purpose above indicated, the accomplishment of which is deemed to be of such importance as fully to justify the small expenditure involved.

The aggregate amount of the estimates for all of the above-mentioned items for 1876 is \$21,844,919, against \$19,982,965 appropriated for 1875, an average increase of 9.31 per cent. This is 1.93 per cent. above the average increase of the estimates for 1875 over the appropriation for 1874; but this again results from the unexpectedly large increase caused by the re-adjustment of pay on railroad routes under the act of March 3, 1873.

Very respectfully,

JOHN L. ROUTT,  
*Second Assistant Postmaster-General.*

HON. MARSHALL JEWELL,  
*Postmaster-General.*



estimate of the amounts necessary to be appropriated for the years 1872, 1873, and 1874, with the appropriation and estimated cost for 1875, and for mail-depredations and special agents, mail-locks and keys, mail-bags and mail-bag catchers, and the preparation and publication of post-route maps.

4 P M G

REPORT OF THE POSTMASTER-GENERAL.

Object.	Cost for 1872.	Cost for 1873.	Cost for 1874.	Increase per cent. for 1873 over 1872.	Increase per cent. for 1874 over 1873.	Appropriation for 1875.	Increase per cent. of appropriation for 1875 over cost for 1874.	Estimated cost for 1875.	Increase per cent. over cost for 1874.	Estimate for 1876.	Increase per cent. for 1876 over estimated cost for 1875.
Inland transportation .....	\$12,572,264 00	\$13,635,341 00	\$15,925,584 00	8.45	16.79	\$16,400,000	2.97	\$17,040,374	7	\$18,062,796	6
Railway post-office clerks .....	821,600 00	941,000 00	1,052,200 00	14.53	12.45	1,320,014	24.74	1,164,020	10	1,257,141	8
Route-agents .....	737,820 00	822,240 00	896,680 00	12.25	8.26	929,035	3.6	926,348	10	1,024,982	10
Mail-route messengers .....	79,910 00	106,740 00	136,540 00	18.71	27.92	160,000	17.18	162,842	20	160,000	12.34
Local agents .....	69,216 00	82,896 00	94,710 00	19.76	15.45	110,323	16.54	108,916	14.99	115,000	5.58
Mail-messengers .....	486,922 00	536,441 00	595,772 00	10.16	11.06	643,533	8.01	661,306	10.99	715,000	8.06
Mail-depredations and special agents .....						160,000				175,000	
Mail-locks and keys .....	28,169 07	38,377 30	39,425 50			50,000				30,000	
Mail-bags and mail-bag catchers .....	191,174 00	170,227 20	201,178 64			180,000				210,000	
Preparation and publication of post-route maps .....						30,000				35,000	
						19,982,965				21,844,919	

\* This includes \$523,527 estimated to be necessary to complete the re-adjustment of pay on railroad-routes under act of March 3, 1873.

† Decrease.

OCTOBER 5, 1874.

JOHN L. ROUTT,  
Second Assistant Postmaster-General.

POST-OFFICE DEPARTMENT,  
OFFICE OF THIRD ASSISTANT POSTMASTER-GENERAL,  
*Washington, D. C., October 25, 1874.*

SIR: I have the honor to submit herewith tables showing—

1. Estimate of the expenditures and revenue of the Post-Office Department for the fiscal year ending June 30, 1876.
2. Detailed statement of payments charged by the Auditor of the Treasury for the Post-Office Department to miscellaneous account.
3. Estimate of indebtedness of the Post-Office Department for the last and previous fiscal years not yet adjusted.
4. Receipts and expenditures during the fiscal year ended June 30, 1874, compared with the years 1872-'73 and 1871-'72.
5. Receipts and disbursements at Treasury depositories on account of the Post-Office Department.
6. Receipts and disbursements at depository post-offices on account of the Post-Office Department.
- 7 and 8. Number and value of postage-stamps, stamped envelopes, and newspaper-wrappers issued during the fiscal year ended June 30, 1874.
9. Number and value of official postage-stamps, stamped envelopes, and newspaper-wrappers furnished the several Executive Departments during the fiscal year ended June 30, 1874.
10. Statement showing increase in issues of postage-stamps, stamped envelopes, and newspaper-wrappers, exclusive of official postage-stamps, stamped envelopes, and wrappers, during the fiscal year ended June 30, 1874.
11. Statement showing increase in issues of postage-stamps, stamped envelopes, and newspaper-wrappers, including official postage-stamps, stamped envelopes, and wrappers, during the fiscal year ended June 30, 1874.
12. Number and value (actual or nominal) of dead-letters received and disposed of during the fiscal year ended June 30, 1874.
13. Comparative statement showing the operations of the Dead-Letter Division during the five fiscal years commencing July 1, 1869, and ending June 30, 1874.

#### EXPLANATION OF ESTIMATES.

As the reports of the First and Second Assistant Postmasters-General set forth the necessities for the sums required by those Bureaus, I respectfully invite your attention to the following detailed statement concerning the appropriations asked for by this Office:

#### ADHESIVE POSTAGE-STAMPS.

The number of ordinary postage-stamps issued during the fiscal year ended June 30, 1874, was.....	632,733, 42 <sup>1</sup> / <sub>2</sub>
Add 10 per cent., being about the average yearly rate of increase .....	63,273, 34 <sup>2</sup> / <sub>5</sub>
<hr/>	
Gives estimated issue of ordinary stamps for fiscal year ending June 30, 1875 .....	696,006, 76 <sup>2</sup> / <sub>5</sub>
Add 10 per cent. increase, as before.....	69,600, 67 <sup>1</sup> / <sub>5</sub>
<hr/>	
Gives estimated issue of ordinary stamps for fiscal year ending June 30, 1876 .....	765,607, 43 <sup>2</sup> / <sub>5</sub>
<hr/>	

Cost of manufacturing that number at present contract-price, 14.99 cents per thousand.....	\$114,764
Add estimated cost of manufacturing official stamps, and also of manufacturing the newspaper and periodical stamps required by act of Congress approved June 23, 1874.....	35,000
	<hr/>
Gives estimated total cost of manufacturing adhesive postage-stamps during fiscal year ending June 30, 1876.....	149,764
	<hr/> <hr/>

In the above estimate the issues of ordinary stamps for the year ended June 30, 1874, and the average rate of increase per year, are taken as a thoroughly safe basis of calculation. For the official stamps and the newspaper and periodical stamps, the estimate is based upon the best information obtainable. The contracts for manufacturing the ordinary and official stamps expire in 1877.

## POSTAGE-STAMP AGENCY.

Salaries of distributing agent and assistants.....	\$5,900
Incidental expenses of agency .....	1,000
	<hr/>
Total .....	6,900
	<hr/> <hr/>

The number of persons employed at this agency since the transfer of the manufacture of stamped envelopes, &c., to Hartford, Conn., is four, viz, an agent, whose salary is \$2,500 per annum, and three clerks, whose salaries are \$1,800, \$1,600, and \$1,400, respectively. It is believed, however, that the necessary work can be performed with two clerks, and appropriation is asked for accordingly.

The incidental expenses consist of the necessary expenses of the agent when required to visit the Department, or while absent from New York in making any investigation ordered by this Office; also the expenses of other agents directed to make investigations connected with the issue of postage-stamps.

## ORDINARY AND OFFICIAL STAMPED ENVELOPES AND WRAPPERS.

The cost of stamped envelopes and newspaper-wrappers, both ordinary and official, issued during the year ended June 30, 1874, at present contract-prices, was.....	\$343,583 28
Add 14 per cent., rate of increase over previous year.....	48,101 66
	<hr/>
Gives estimated cost for year ending June 30, 1875.....	391,684 94
Add 14 per cent. increase as before.....	54,835 06
	<hr/>
Gives estimated cost of manufacture for the year ending June 30, 1876....	446,520 00
	<hr/> <hr/>

The contract under which the ordinary and official stamped envelopes and wrappers are being furnished is for four years, and will not expire until September 30, 1878. The prices for their manufacture will therefore remain unchanged. The estimated aggregate cost is based upon the cost, at present contract-prices, of the issues during the last fiscal year, adding thereto the ratio of increase of that over the preceding year.

## STAMPED-ENVELOPE AGENCY.

Salaries of agent and assistants.....	\$13,095
Incidental expenses of agency.....	1,000
	<hr/>
Total .....	14,095
	<hr/> <hr/>

The number of persons employed at present at this agency is nine, viz: a special agent in charge, whose salary is \$1,600 per annum and \$3 per day; one clerk at \$1,800, and two clerks at \$1,200 each, employed in distribution; one clerk at \$1,800, and three clerks at \$1,200 each, employed in the registration of packages; and one laborer at \$800. This force is thought to be sufficient for the probable requirements of the service during the year 1875-'76.

The incidental expenses of this agency, situated in Hartford, Conn., where the envelopes are manufactured, are of the same character as those of the postage-stamp agency at New York.

POSTAL CARDS.

The period since the introduction of postal cards, on the 1st of May, 1873, has been too short to allow of a yearly comparison of issues. It is probable, however, that there will be an average increase per year of at least 12 per cent.; and it is upon this assumption that the following estimate is made, taking as a basis the issues for the year 1873-'74:

Number of postal cards issued during the fiscal year ended June 30, 1874.	91,079.000
Add 12 per cent. for increase.....	10,929.400
Gives estimated issue for the year ending June 30, 1875.....	102,008.400
Add 12 per cent. increase, as before.....	12,241.010
Gives estimated issue for the year ending June 30, 1876.....	114,249.410
Cost of manufacturing that number, at present contract-prices, \$1.39½ per thousand .....	\$159,806.00

The present contract does not expire until April 30, 1877.

POSTAL-CARD AGENCY.

Salaries of agent and assistants .....	\$4.00
Incidental expenses of agency.....	1.00
Total .....	5.00

At present there are employed at Springfield, Mass., in connection with the inspection and distribution of postal cards, an agent at a salary of \$2,000 per annum, and two clerks, one at \$1,400 and the other at \$1,200 per annum. This force is considered sufficient for the prospective increase of business.

The remarks under the head of "Postage-stamp agency," as to incidental expenses, will apply also to the appropriation required for that purpose for the use of the postal-card agency.

ADVERTISING.

This appropriation covers the payments for advertisements for proposals for carrying the mails and for furnishing supplies of all kinds, as well as the advertisement of unclaimed letters at post-offices, and such other miscellaneous advertising as may be required.

The following sums have been expended:

During the fiscal year ended June 30, 1869.....	\$79,565.41
During the fiscal year ended June 30, 1870.....	66,571.71
During the fiscal year ended June 30, 1871.....	57,459.50
During the fiscal year ended June 30, 1872.....	53,112.25
During the fiscal year ended June 30, 1873.....	81,412.00
During the fiscal year ended June 30, 1874.....	109,740.60
Amount appropriated for fiscal year ending June 30, 1875.....	80,000.00

During the fiscal year ending June 30, 1876, advertisements inviting proposals for carrying the mails in fourteen States will have to be published, as well as all the general advertising of the Department and post-offices. It is therefore estimated that there will be required for this purpose for the next fiscal year the sum of \$115,000.

The appropriation for the current fiscal year is \$15,000 less than the estimate submitted therefor by this Bureau. (See page 11, appendix, Postmaster-General's Report, year ended June 30, 1873.) It is believed that the sum appropriated will not be sufficient to pay for all the advertising required by law during the year, and that an additional appropriation to supply the deficiency will be necessary.

#### REGISTERED-PACKAGE ENVELOPES, LOCKS, AND SEALS.

It is estimated that there will be required for this purpose during the fiscal year ending June 30, 1876, the sum of \$65,620.

The appropriations under this head for previous years furnish only a slight basis for estimating the amount which will doubtless be required for the ensuing fiscal year. During the past year the number of registered-package envelopes issued exceeded the anticipations of the Department, showing conclusively that the growth of this branch of the service, under proper care, can hardly be overestimated.

#### POST-OFFICE ENVELOPES.

Number of post-office envelopes issued during the fiscal year ended June 30, 1874.....	19, 632, 810
Add 31 per cent., rate of increase over preceding year.....	6, 086, 171
Gives estimated issue for year ending June 30, 1875.....	25, 718, 981
Add 31 per cent., increase as before.....	7, 972, 884
Gives estimated issue for year ending June 30, 1876.....	33, 691, 865
Cost of manufacturing that number at present contract prices.....	\$66, 560

These envelopes are required principally for the business of the registered-letter and money-order systems, the increasing popularity of both of which will explain the large increase of issues. The contract from which the prices are taken will expire June 30, 1875, but it is not believed that the envelopes can be thereafter obtained at any cheaper rates.

#### DEAD-LETTER ENVELOPES.

The number of envelopes used in returning dead letters to writers during the fiscal year ended June 30, 1874, was.....	1, 907, 000
Add 10 per cent. for increase.....	190, 700
Gives estimated number required for 1874-'75.....	2, 097, 700
Add 10 per cent., as before.....	209, 700
Gives estimated number required for fiscal year ending June 30, 1876.....	2, 307, 400
The cost of which at present contract price will be.....	\$3, 750

The increase in the number of dead letters returned to writers during the last fiscal year over the preceding year was only 19,095, or a trifle over 1 per cent. This being very much smaller than the usual increase, (about 17½ per cent.,) it has been thought safe to assume an increase of 10 per cent. for the fiscal years ending June 30, 1875 and 1876.

The cost is calculated upon present contract price, as, although this contract will expire June 30, 1875, the rate now paid is so reasonable that no reduction therefrom is anticipated.

#### SHIP, STEAMBOAT, AND WAY LETTERS.

This appropriation is required under sections 166, 222, 223, and 224 of the act of June 8, 1872, to pay the masters or owners of vessels not regularly engaged in carrying the United States mails for letters brought in their vessels and delivered to the post-offices at ports of arrival, and from thence transmitted to destination in the mails.

The amounts so paid are added to the regular rates of postage, and are paid by the parties addressed on delivery of the letters, and thus are repaid to the Department.

No reliable data can be furnished on which to base an estimate of the amount required for this purpose during any future fiscal year. The payments during several years past have been :

During the fiscal year ended June 30, 1869.....	\$2,076 35
During the fiscal year ended June 30, 1870.....	9,247 39
During the fiscal year ended June 30, 1871.....	10,716 45
During the fiscal year ended June 30, 1872.....	7,011 06
During the fiscal year ended June 30, 1873.....	4,259 96
During the fiscal year ended June 30, 1874.....	4,185 42
The amount appropriated for 1874-'75 is .....	7,500 00

In view of the irregularity of expenditure thus shown, I have estimated the amount required for the fiscal year ending June 30, 1876, at \$7,500.

#### OFFICE FURNITURE.

This appropriation is necessary for the purpose of supplying post-offices with articles of furniture actually needed, and for renewing and repairing the same. It is impossible to furnish reliable data on which to base the estimate of the amount which will be required for this purpose during the next fiscal year, as the wants of post-offices cannot be determined so far in advance.

There have been expended during previous years the following sums:

During the fiscal year ended June 30, 1869.....	\$2,284 65
During the fiscal year ended June 30, 1870.....	2,195 37
During the fiscal year ended June 30, 1871.....	3,211 51
During the fiscal year ended June 30, 1872.....	6,535 53
During the fiscal year ended June 30, 1873.....	6,365 37
During the fiscal year ended June 30, 1874.....	32,711 30
Amount appropriated for fiscal year ending June 30, 1875.....	6,500 00

The apparently large increase shown in the expenditures during the fiscal year 1873-'74 is explained by a statement of the fact that formerly this item embraced only the allowances made for the purchase of plain desks or cases, at the smaller offices, for the safe-keeping of letters; but during the last fiscal year the Auditor of the Treasury for this Department charged against this appropriation the amounts expended for furniture purchased at all offices, together with repairs to the same, which had previously been charged to "miscellaneous and incidental expenses of offices."

Owing to this change it is estimated that there will be needed during the fiscal year 1875-'76, for this purpose, \$35,000.

In this connection I wish to call your attention to the fact that although this Bureau is charged with the duty of making estimates for this purpose, no part of the expenditure comes within its control.



FEEES TO UNITED STATES ATTORNEYS, MARSHALS, CLERKS OF UNITED STATES COURTS, ETC.

This appropriation is used to pay the fees allowed for the proper prosecution of suits against postmasters and others. The amount required varies each year according to the exigencies of the service. Former payments have been—

During the fiscal year ended June 30, 1869.....	\$6,758 74
During the fiscal year ended June 30, 1870.....	8,965 10
During the fiscal year ended June 30, 1871.....	6,431 55
During the fiscal year ended June 30, 1872.....	5,141 76
During the fiscal year ended June 30, 1873.....	6,480 76
During the fiscal year ended June 30, 1874.....	4,648 71
Amount appropriated for 1874-'75 .....	7,500 00
Amount estimated as required for 1875-'76.....	7,500 00

ENGRAVING, PRINTING, AND BINDING DRAFTS AND WARRANTS.

This appropriation covers the expense of furnishing drafts and warrants for the payment of all debts due by the Post-Office Department, and for collecting the balances due by postmasters to the United States. The work is not done by the Congressional Printer, as the plates are of steel, but by the Bureau of Engraving and Printing of the Treasury Department.

There was expended during the fiscal year ended June 30, 1874.....	\$1,180 3 <sup>0</sup>
And there was appropriated for the fiscal year ending June 30, 1875.....	3,000 0 <sup>0</sup>
The same sum, as appropriated for the current year, is estimated as required for the next fiscal year, viz .....	3,000 00

MISCELLANEOUS.

Under this head are charged all items of necessary expense that cannot be included in any regular appropriation. These expenses vary from year to year, as emergencies arise, and it is impossible to fix precisely the sum required.

There was appropriated for this purpose, for the current fiscal year, the sum of \$2,500, and the same sum is asked for the year ending June 30, 1876.

SUMMARY OF ESTIMATES.

The following table shows the amounts estimated to be required by this Bureau for the service of the fiscal year 1875-'76, as compared with the appropriations for 1874-'75:

Classification of items.	Estimated as required for 1875-'76.	Appropriated for 1874-'75.
Adhesive postage-stamps.....	\$149,764	\$118,667
Postage-stamp agency.....	6,900	10,200
Stamped envelopes and wrappers.....	446,520	535,424
Stamped-envelope agency.....	14,095	.....
Postal cards .....	159,806	168,270
Postal-card agency.....	5,600	5,600
Advertising .....	115,000	80,000
Registered-package envelopes, &c.....	65,620	42,680
Post-office envelopes.....	66,560	60,000
Head-letter envelopes.....	3,750	4,585
Ship, steamboat, and way letters.....	7,500	7,500
Office-furniture .....	35,000	6,500
Fees to United States attorneys, &c.....	7,500	7,500
Drafts and warrants.....	3,000	3,000
Miscellaneous .....	2,500	2,500
	1,089,115	1,052,426

This table shows an increase of \$36,689 in the amount estimated as required for 1875-'76 over the appropriations for 1874-'75, or about 3½ per cent. The sums asked for have been made as small as was deemed consistent with the interests of the service, and it is believed that no reduction can safely be made.

#### OPERATIONS OF THE BUREAU.

The following detailed statement shows the operations of the various divisions of this Bureau during the past fiscal year, and sets forth the necessity for increased clerical force consequent upon the growth of the postal service:

##### DIVISION OF FINANCE.

The work of this division is so diversified that without great elaboration much of it cannot be made to appear in any report.

During the last fiscal year 3,280 contracts for mail-service were received from the Second Assistant Postmaster-General, and the data necessary for correct payments to mail-contractors entered upon the books of this division; 5,776 orders of the Postmaster-General, recognizing mail-service not under contract, curtailing or extending mail-service, or modifying previous orders, were received, examined to insure the accuracy thereof, and entered upon the books in like manner; 28,000 reports in settlement of accounts (for pay of mail-contractors, special, blank, stamp, postal-card, and mail-lock agents) were received from the Auditor of the Treasury for this Department, examined, the calculations verified by the data already recorded, the amounts paid, and the dates of passing the reports entered.

Accounts were kept with 33 Treasury depositories, involving the receipt and disbursement of \$12,600,000. Against this sum 10,649 warrants were drawn, registered, and posted to the proper accounts. These warrants were mailed to the payees, each accompanied by a receipt, which, when signed and returned, was properly entered upon the books of the division, in order to show the delivery of the warrants. (For a detailed statement in regard to this, see Table No. 5, attached to this report.)

There were also kept accounts with 179 post-office depositories, amounting to \$4,177,589.65, of which \$3,224,415.38 arose from the proceeds of the depositories themselves, \$85,899.17 from collection-drafts, and \$867,275.10 from deposits by other post-offices. For this last-mentioned sum 7,526 certificates of deposit were received and entered. Against the aggregate accumulation in these depositories, 17,909 drafts were issued and posted to the credit of postmasters. In addition to the amount paid out by draft, the sum of \$1,323,319.69 was paid to route-agents, railway post-office clerks, mail-messengers, and letter-carriers, by various offices. The accounts of these offices were submitted monthly, compared with the books of this division, and, if found correct, checked off and filed for future reference; if incorrect, they were returned, accompanied by letters pointing out errors and directing the manner of correction.

The books of this division are balanced weekly, to facilitate payments to creditors of the Department.

During the year the Auditor forwarded to this Bureau 531 statements of accounts with postmasters, which were promptly transmitted to those officials, together with letters of advice and instructions regarding the same.

Upon the deposit-desk of this division a record of 4,527 depositing-offices was kept, showing that 11,600 certificates of deposit were received and entered; 8,880 circulars of instruction were sent to postmasters; 1,428 Auditor's statements of account were sent out; and 661 letters from postmasters relative to balances due were received and noted upon the books.

The duties of this division are not only arduous, but of the highest importance to the Department. They are performed promptly and well; and, believing that the clerks engaged in their performance should receive higher compensation than is now allowed, I have, in my estimate for the clerical force required by this Bureau during the next fiscal year, applied for higher-grade clerkships for most of these gentlemen.

#### DIVISION OF POSTAGE-STAMPS, STAMPED ENVELOPES, AND POSTAL CARDS.

The number of adhesive postage-stamps issued to postmasters for sale to the public during the year was 632,733,420, valued at \$17,275,242; of ordinary stamped envelopes, "plain," 65,107,500, valued at \$1,927,952.30; of stamped envelopes bearing a "return request," 51,940,250, valued at \$1,733,738.40; of ordinary newspaper-wrappers, 19,370,750, valued at \$220,502.06; of postal cards, 91,079,000, valued at \$910,790; of official postage-stamps issued to Executive Departments for official use, (including those distributed prior to July 1, 1873,) 32,320,085, valued at \$1,415,845.20; and of official stamped envelopes and wrappers, 12,900,300, valued at \$353,456.66; making a total number of 905,451,305, and a total value of \$23,837,526.62. The increase in the value of ordinary issues over the preceding year was \$1,668,448.76, or 8.17 per cent. The increase, including the issues for official use, was \$3,437,750.62, or 16.85 per cent.

In calculating the value of both ordinary and official stamped envelopes, &c., the gross value, or the cost of manufacture added to the postage-value, is taken.

There were also issued within the year 2,922,000 registered-package envelopes, 9,129,510 post-office envelopes, and 2,809,800 dead-letter envelopes; total, 14,861,310.

The total number of requisitions filled was 278,296, as follows: For ordinary postage-stamps, 86,218; for official postage-stamps, 39,268; for ordinary stamped envelopes and wrappers, "plain," 39,060; for "special-request" stamped envelopes, 28,437, (embracing 45,015 different "requests;") for official stamped envelopes, &c., 1,544; for postal cards, 23,634; for registered-package envelopes, 30,360; and for post-office envelopes, 29,775.

The number of packages of ordinary postage-stamps forwarded was 87,613; of official postage-stamps, 42,086; of ordinary stamped envelopes and wrappers, "plain," 52,146; of "special-request" envelopes, 40,091; of official stamped envelopes, &c., 2,458; of postal cards, 25,715; of registered-package envelopes, 32,400; and of post-office envelopes, 35,853; total, 318,362.

The losses in the mails during the year amounted to \$183.15, and consisted of two packages of postage-stamps valued at \$175, and one package of stamped envelopes valued at \$8.15. This is the lowest number of packages ever lost in any one year.

During the past year the labor of this division has been largely increased by reason of the introduction of postal cards and official stamps and envelopes, as well as by the natural increase in the issues of ordi-

nary stamps and envelopes. A further augmentation is to be expected from the inauguration of the system of compulsory prepayment of postage on newspapers and periodicals by means of postage-stamps specially prepared and issued for that purpose, which system, under the act of Congress approved June 23, 1874, will go into effect on January 1, 1875.

The clerical force of the division proper (excluding the agencies) numbers 29, and the additional duties already imposed have been performed only by the most extraordinary effort. The necessity for additional clerks, as asked for in the estimate for the next fiscal year, will be apparent on consideration of the facts above recited; and unless this increase be granted it will be impossible to properly perform all the work required.

#### DIVISION OF REGISTERED LETTERS.

In my last annual report I devoted considerable space to a detail of the needs of this division, consequent upon the growth and importance of the registered-letter branch of the postal service. Therein I recommended an increase of clerical force, in order that the business of the division might be properly attended to, and adverted to a proposed change in the method of transmitting registered letters, by which greater security and celerity could be obtained.

During the past year the increase in the issue of registered-package envelopes to postmasters upon their requisitions therefor has been more than 30 per cent. over the issues of the previous fiscal year. Part of this increase is doubtless owing to the reduction of the fee for registering domestic letters from fifteen to eight cents, which took effect January 1, 1874; but much is due to the greater attention which, with the limited facilities at its command, the Department has endeavored to give the system, and which has augmented public confidence therein.

The proposed change in the mode of transmitting this class of letters, as indicated in my report, has, however, not yet been made, it being deemed inexpedient to put the new scheme into operation until proper legislation to carry it into entire effect was obtained from Congress.

Recognizing the importance of the registered-letter system to the public, and the necessity of giving to its workings more attention than could be given with the force at the disposal of the Department, and also the demand for such enactments as would more nearly attain absolute security in the transmission of registered matter by imposing a more rigid responsibility upon the officials of the Department through whose hands it might pass, the Postmaster-General, on the 27th of May of this year, addressed a letter to the chairman of the Committee on the Post-Office and Post-Roads of the House of Representatives, setting forth the facts, and recommending such immediate legislation as would, in his judgment, enable the Department to meet the wants of the public and increase the efficiency and security of the system. A bill for this purpose was offered in the House of Representatives, and referred to the Post-Office Committee, but, owing to the near termination of the session, no action was taken thereon, and it remains still pending.

The reasons assigned by the Postmaster-General, in the letter referred to, for the increase of the clerical force of this division, exist in still greater force at this time. The use of the system by the public, judged by the issue of registered-package envelopes to postmasters upon their requisitions, (which is the only means at command for ascertaining that use,) is constantly increasing. Although reports of this business from the offices throughout the country have been received each quarter during the past fiscal year, they still remain unclassified and unrecorded

from want of the necessary force to perform the work. I have, therefore, in preparing the estimate of clerks necessary for the proper working of this Bureau, included, for this division, the number asked for in the bill now pending, and even that number will scarcely be sufficient to perform thoroughly and promptly all the work which should properly be done.

The registration of letters is an important feature of the postal system in every country. In England, France, and Germany this branch of the service is largely used by the people, and is considered satisfactory in its workings. In England the number of letters so transmitted is not only very large, and in about the same proportion to ordinary letters as in this country, but the losses have, under careful management and the imposition of strict responsibility, dwindled down to nearly nothing. In Canada, while the number transmitted is not so great as in this country, the relative proportion to ordinary letters is much larger, and the losses steadily decrease year by year. In this country, the report of the Chief of Division of Mail Depredations for the last fiscal year shows that, notwithstanding the great increase of the number of letters registered, the losses were less than during the previous year, and are estimated as only twenty-eight thousandths of one per cent. of the whole number transmitted. If such a showing can be exhibited with the present facilities for conducting the operations of the system, it is fair to suppose that better results can be obtained with proper legislation and a remodeling of the system to attain greater celerity and security with fewer handlings of letters and a less divided responsibility of officials. There is every reason to believe that such congressional action as is desired would materially enhance the value of the system to the public, and result in increased usefulness for it.

I desire also to renew my recommendation that every post-office throughout the United States be furnished with a postmarking and canceling stamp, as an additional measure of protection from loss in transmitting registered letters. The importance of this was fully set forth in my last annual report; and, in connection with another subject, will be referred to at the close of this report.

#### DIVISION OF DEAD-LETTERS.

The operations of this division during the last fiscal year may be epitomized as follows: Number of domestic letters received, 4,348,473; number of foreign letters received, 253,300—total, 4,601,773, representing an actual or nominal value of \$4,637,429.08, exclusive of jewelry and other property, which class of inclosures is treated as possessing no money-value that can with correctness be determined. Of the total number of letters received, 1,392,224, representing \$3,909,868.46, were delivered to the owners or writers, including 225,893 foreign letters which were returned unopened to the countries whence they came; 24,863, representing \$240,183.62, which, from various causes, could not be returned to the writers or owners, were filed for reclamation; and 561,767, representing \$487,377, were, at the close of the fiscal year, either on hand not acted upon, or outstanding in the hands of postmasters for delivery; 2,622,619, which were either worthless, (containing circulars, &c.,) or could not be delivered, were destroyed. Of this last number 314,700 had once been sent out for delivery, and, remaining unclaimed at the expiration of the proper time, had been returned.

During the year 6,420 applications were received from persons desirous of recovering supposed dead-letters. In 2,140 of these cases search was successful, and the letters were forwarded to the applicants or owners.



The amount received from unclaimed dead letters and deposited in the Treasury was \$8,721, and the money-value of stamps received for postage due on letters was \$1,612.45. The postage reclaimed on foreign letters returned to other countries was \$1,476.54, and that reclaimed on letters received from foreign countries amounted to \$330.58.

Soldiers' and sailors' letters, to the number of 945, were, as by law permitted, forwarded to destination, the postage due thereon to be paid at the office or station of delivery.

This division is, by the nature of its duties, brought into close contact with the people of the United States, as well as the postal authorities of all countries with which this Government has postal treaties. With such wide-spread business relations, it is imperative that its dealings should be prompt and exact. I am glad to be able to state that a gratifying improvement in the management and execution of the duties devolving upon it has taken place during the past year.

#### DIVISION OF FILES, RECORDS, AND MAILS.

During the past year this division was separated from the division of finance and placed in charge of a competent clerk, who, with two assistants, has performed a great amount of labor.

Over 650,000 communications were received, opened, classified, and referred to the proper divisions. Every letter received was indexed, and, after proper action being taken thereon, returned to the files, note of such action being recorded on the books of this division, and all letters sent out from the Bureau were copied (both in press and permanent form) and recorded.

#### GENERAL REMARKS.

At the last session of Congress the subject of postage on newspapers and periodicals was taken into consideration by that body, resulting in the passage of a bill compelling prepayment of postage, and fixing the rate at two cents per pound on all of that class of matter published once a week, or more frequently, and transmitted to regular subscribers through the mails, and three cents per pound on such matter issued less frequently than once a week. The provisions of this law are to go into effect January 1, 1875.

The Postmaster-General being by the law confined to a choice of one of three modes of collecting that postage by means of stamps, considerable attention has been given to the matter by this Office. After a careful review of the plans proposed, it was deemed best to recommend the adoption of the system of prepayment by postage-stamps "affixed to a memorandum of mailing," or, in other words, to a stub in a book retained by the postmaster at the mailing-office; a receipt, showing the weight of matter and the amount paid, being given by the postmaster to the person mailing the same; the stamps affixed to the stub to be canceled by a cutting-punch, thus preventing their re-use. This plan, it is believed, is more practicable and less expensive in its operations than either of the others, while, at the same time, it will be quite as effectual in collecting the postage.

The Postmaster-General having approved the recommendations of this Office, a series of stamps has been devised of twenty-four denominations, by means of which any sum which is a multiple of either the two or three cent rate, from two cents to seventy-two dollars, can be made by the use of not more than five stamps.



It is expected that notwithstanding the reduction of rates by the law, the system of compulsory prepayment of newspaper-postage will yield a larger revenue to the Department than has ever been collected. In the city of New York alone a comprehensive inquiry seems to warrant the belief that not less than \$600,000 per annum will be paid, a sum which is little less than one-half of the entire revenue from newspaper-postage throughout the United States during the fiscal year just closed. It is, however, impossible to estimate the actual increase for the whole country, owing to that provision of the law which allows the free-mail circulation of newspapers in the counties in which they are printed.

Almost immediately after assuming charge of this Bureau my attention was called to the number of reports from postmasters and special agents of the Department concerning letters on which postage was attempted to be paid by means of previously-used stamps. Careful investigation into the matter leads to the conclusion that a large number of postage-stamps after being once properly used are detached from letters, and, the canceling-marks being removed therefrom, used again in payment of postage.

This proportion will, I believe, probably reach five per cent. of the value of all the stamps sold each year, causing an annual loss of a million of dollars to the revenues of the Department. My belief is confirmed, not only by the number of such letters forwarded to the Dead-Letter Division of this Office as "held for postage," but also by the proffer of canceled stamps for sale to the Department and to the contractors for furnishing the postage-stamps.

The ease with which the cancellation marks can be removed from stamps is a great incentive to this fraud, especially in view of the fact that in the larger offices throughout the country it is impossible to critically examine every letter posted in order to ascertain whether or not the stamp thereon has previously been used. Such an examination would either cause serious delay in dispatching the mails or involve the Department in a greater expenditure than would be warranted in attempting to protect it from loss.

None of the post-offices throughout the country are furnished with canceling-ink by the Department, and many of them are not even provided with postmarking and canceling stamps. The larger offices are permitted to buy such ink as may be selected by them for that purpose, but the Department has never undertaken to furnish indelible canceling-ink to those offices supplied by it with the postmarking and canceling stamps. At many of the smaller offices, not supplied with such stamps, no trouble whatever is taken to cancel the postage-stamps by drawing lines thereon with writing-ink, and, consequently, no difficulty is presented to the re-use of such uncanceled stamps.

In this connection the recommendations made in my last annual report, as well as my remarks in this report under the heading of "registered letters," especially apply. If the furnishing of postmarking and canceling stamps to all offices is essential to the proper workings of the registered-letter system, such articles are of more importance to the general postal service. In all foreign countries the greatest care in this respect is taken. The postmarks on undelivered foreign letters received at the Dead-Letter Division of this Office are generally clearly and sharply imprinted, while the cancellation of their postage-stamps is almost, if not quite, perfect. I am informed that the English government paid quite a large sum for the recipe setting forth the component

parts of an ink which, after repeated tests, was found to be nearly, if not quite, irremovable, and throughout Europe every post-office is furnished with postmarking and canceling stamps and canceling-ink.

In order not only to facilitate the workings of the registered-letter system, but to prevent fraud in the re-use of stamps, the same practice should be observed by the Post Office Department in this country. If it is deemed conducive to public interests to establish a post-office at any place, the person who is placed in charge of that office should be supplied with everything necessary for the proper performance of his duties and the protection of the Government, no matter whether his salary or emoluments amount to one dollar or one hundred dollars per year; and until the Department does furnish to every post-office throughout the country a complete outfit of postmarking and canceling stamps, with the necessary supply of indelible canceling-ink, the washing and re-use of postage-stamps cannot be prevented.

Very respectfully, &c.,

EDWARD W. BARBER,  
*Third Assistant Postmaster-General.*

**No. 2.—Statement of payments made under sundry heads, charged to miscellaneous accounts, for the fiscal year ended June 30, 1874.**

For allowances to postmasters for office-repairs, gas-fixtures, telegraphing, and miscellaneous items.....	\$105,309 51
For preparation and publication of post-route maps.....	25,792 18
For post-office and official stamped envelopes.....	50,106 41
For registered package envelopes and seals.....	19,420 54
For fees to United States marshals.....	1 320 28
For fees to clerks of courts.....	796 08
For fees to attorneys.....	2,532 35
For engraving, printing, and binding drafts and warrants.....	1,180 30
For expenses in negotiating postal convention with France.....	300 00
For expenses in examining the registered-letter system.....	312 75
For moieties to informers in cases of violation of post-office law.....	1,459 63
For law-books for use of Post-Office Department.....	687 00
For safe for Dead-Letter Office.....	337 50
<b>Total .....</b>	<b>209,554 53</b>

**EDWARD W. BARBER,**  
*Third Assistant Postmaster-General.*

**No. 3.—Estimate of indebtedness of Post-Office Department for fiscal year ended June 30, 1874, not yet adjusted.**

Balances due foreign countries.....	\$125,900 00
Mail-service under contract or recognized, but not yet reported for payment .....	549,735 63
<b>Mail-service unrecognized :</b>	
Fiscal year ended June 30, 1872 .....	\$50,336 00
Fiscal year ended June 30, 1873.....	23,9436 00
Fiscal year ended June 30, 1874 .....	495,797 00
	<b>765,569 00</b>
	<b>1,461,204 63</b>

**EDWARD W. BARBER,**  
*Third Assistant Postmaster-General.*

No. 4.—Statement exhibiting receipts and expenditures, under appropriate heads, by quarter, and June

## RECEIPTS.

	Quarter ended September 30, 1873.	Quarter ended December 31, 1873.	Quarter ended March 31, 1874.	Quarter ended June 30, 1874.
Letter-postage.....	\$76,187 48	\$75,288 96	\$89,260 88	\$85,557 93
Newspapers and pamphlets.....	342,658 47	349,354 47	353,195 14	341,165 94
Emoluments.....	316,702 03	308,497 40	302,422 40	299,304 02
Fines.....	2,363 10	1,793 15	4,169 41	2,385 46
Stamps, stamped envelopes, and postal cards.....	6,355,160 46	5,291,396 02	5,752,501 07	5,929,664 63
Dead-letters.....	1,951 00	2,800 00	2,070 00	1,900 00
Miscellaneous.....	6,019 61	3,371 58	3,742 25	4,990 74
Revenue from money-order business.....				105,194 12
Total.....	7,107,042 15	6,032,501 58	6,507,361 15	6,230,166 94

Comparison, including revenue from money-order business and official postage-stamps:

Increase of receipts over year ended June 30, 1873, \$3,480,330 25, or 15.134 + per cent.

Increase of receipts over year ended June 30, 1872, \$4,561,681 63, or 20.81 + per cent.

## EXPENDITURES.

Compensation to postmasters.....	\$1,456,328 72	\$1,454,243 56	\$1,449,252 11	\$1,458,647 74
Ship, steamboat, and way letters.....	1,280 79	1,143 49	701 01	1,063 13
Transportation of the mails.....	4,485,978 77	4,812,615 42	4,717,122 48	4,865,602 34
Wrapping-paper.....	6,450 00	6,450 00	1,825 00	5,475 00
Office-furniture.....	6,774 41	15,819 14	4,690 78	5,427 57
Advertising.....	57,418 49	12,857 22	9,613 81	29,851 16
Mail-bags and catchers.....	63,269 80	49,871 91	49,503 51	50,069 54
Blank-agent and assistants.....				
Mail locks and keys.....	11,642 55	19,425 12	6,731 38	2,344 66
Postmarking and canceling stamps.....	1,919 18	2,165 82	1,994 69	1,873 40
Mail-depredations and special agents....	40,407 49	38,290 21	53,278 11	33,502 42
Clerks for post-offices.....	795,909 12	818,535 80	824,197 83	859,319 02
Postage-stamps, stamped envelopes, and postal cards.....	260,075 59	141,568 36	200,112 03	243,440 14
Letter-carriers.....	436,746 40	455,915 51	455,693 35	454,063 42
Dead letters.....	550 88		2,995 17	2,437 94
Repairs to Post-Office building.....				
Twine.....	13,728 00	10,547 50	6,006 50	19,292 54
Letter-balances.....	663 00		2,336 90	1,750 00
Rent, light, and fuel.....	82,603 88	92,900 40	96,138 03	105,056 14
Miscellaneous:				
Stationery.....	9,521 10	9,799 45	8,961 76	8,126 66
Post-route maps.....	4,714 20	3,820 89	7,569 04	6,294 14
Miscellaneous.....	36,845 55	53,595 80	41,913 96	54,800 59
Balances due foreign countries:				
Great Britain.....	10,242 37	23,140 72	52,122 44	
North German Union.....	30,210 83	20,898 93	18,496 60	21,631 52
Belgium.....	2,105 42	2,200 57	5,202 43	
Denmark.....	1,095 09			760 79
Sweden.....			5,063 62	11,713 02
Total.....	7,816,541 63	8,045,805 82	8,021,522 58	8,242,544 55

Comparison:

Increase of expenditures over year ended June 30, 1873, \$3,041,468 91, or 10.457 + per cent.

Increase of expenditures over year ended June 30, 1872, \$5,468,222 27, or 20.510 + per cent.

for the fiscal year ended June 30, 1874, compared with the fiscal years ended June 30, 1873, 30, 1872.

RECEIPTS.

Total year ended June 30, 1874.	Aggregate for comparison.	Total year ended June 30, 1873.	Compared with year ended June 30, 1873.		Total year ended June 30, 1872.	Compared with year ended June 30, 1872.	
			Increase.	Decrease.		Increase.	Decrease.
\$326,295 25	.....	\$348,849 49	.....	\$22,554 24	\$345,868 58	.....	\$19,573 33
1,392,374 06	.....	1,072,998 19	\$319,375 87	.....	985,940 21	\$406,433 85	.....
1,226,925 85	.....	1,150,042 38	76,883 47	.....	1,086,895 50	140,030 35	.....
10,711 12	.....	3,917 39	6,793 73	.....	12,616 63	.....	7,905 51
21,368,722 20	.....	20,324,817 50	3,063,904 70	.....	19,009,921 44	4,378,800 76	.....
8,721 00	.....	6,208 00	2,513 00	.....	7,299 00	1,422 00	.....
12,124 22	.....	21,324 62	.....	3,200 40	17,451 20	673 02	.....
105,198 12	.....	68,584 00	36,614 12	.....	443,397 63	.....	338,199 51
21,477,071 82	.....	22,996,741 57	3,506,084 89	25,754 64	21,915,390 19	4,927,359 98	365,678 35
22,996,741 57	.....	.....	25,754 64	.....	26,477,071 82	365,678 35	.....
3,420,330 25	.....	.....	3,420,330 25	.....	4,561,681 63	4,561,681 63	.....

Comparison, excluding revenue from money-order business and official postage-stamps:  
Increase of receipts over year ended June 30, 1873, \$1,674,411 27, or 7.30 per cent.  
Increase of receipts over year ended June 30, 1872, \$3,130,576 28, or 14.579 per cent.

EXPENDITURES.

\$5,818,472 17	.....	\$5,725,468 12	\$93,004 05	.....	\$5,121,665 20	\$696,806 97	.....
4,188 42	.....	4,257 96	.....	\$69 54	7,011 06	.....	\$2,822 64
12,881,319 05	.....	16,833,682 58	2,047,636 47	.....	15,547,820 53	3,333,498 52	.....
20,200 00	.....	23,494 49	.....	3,294 49	28,623 62	.....	8,483 68
32,711 90	.....	6,368 57	26,343 33	.....	6,535 58	26,176 32	.....
109,740 68	.....	81,412 60	28,328 08	.....	53,112 33	56,628 35	.....
212,714 76	.....	170,227 20	42,487 56	.....	191,174 00	21,540 76	.....
.....	.....	7,500 00	.....	7,500 00	9,177 52	.....	9,177 52
40,143 71	} \$48,097 25	38,377 30	9,719 95	.....	28,169 07	19,928 18	.....
7,953 54		157,963 26	7,515 37	.....	131,776 47	33,702 16	.....
165,478 63	.....	2,972,614 24	319,347 53	.....	2,785,253 63	512,708 14	.....
3,297,961 77	.....	653,921 76	191,274 32	.....	535,828 84	309,367 24	.....
443,196 08	.....	1,422,990 69	379,427 99	.....	1,385,965 76	416,452 92	.....
1,402,418 68	.....	.....	5,983 80	.....	.....	5,983 89	.....
5,983 89	.....	11,735 15	.....	11,735 15	.....	.....	.....
49,574 50	} 677,046 35	669,890 70	7,155 65	.....	573,426 34	103,620 01	.....
4,749 90		.....	.....	.....	.....	.....	.....
376,692 45		.....	.....	.....	.....	.....	.....
36,468 97		.....	.....	.....	.....	.....	.....
22,398 33	.....	44,957 18	40,548 35	.....	116,414 02	.....	30,908 49
157,156 20	.....	232,869 29	.....	147,631 41	127,237 14	.....	35,999 26
25,505 53	.....	11,533 13	.....	2,024 71	8,941 14	567 28	.....
91,237 88	.....	3,681 45	.....	1,825 57	.....	1,255 88	.....
9,508 42	.....	.....	16,777 24	.....	.....	16,777 24	.....
1,855 88	.....	.....	.....	.....	.....	.....	.....
16,777 24	.....	.....	.....	.....	.....	.....	.....
2,126,414 58	.....	29,084,945 67	3,215,549 78	174,080 87	26,652,192 31	5,555,613 86	87,391 59
2,004,945 67	.....	.....	174,080 87	.....	32,126,414 58	87,391 59	.....
1,041,468 91	.....	.....	3,041,468 91	.....	5,468,222 27	5,468,222 27	.....

ED VARD W. BARBER,  
Third Assistant Postmaster-General.

## No. 5.—Receipts and disbursements at Treasury

Depositories.	Deposits.	Grants from Treasury.	By transfer.	Aggregate accumulation.	Aggregate receipts.
Treasurer U. S., Washington, D. C.....	\$457, 018 75		\$603, 273 28	\$1, 060, 292 03	\$457, 018 75
Asst. treasurer U. S., Baltimore, Md.....	154, 415 83		280, 000 00	434, 415 83	154, 415 83
Asst. treasurer U. S., Boston, Mass.....	566, 144 54			566, 144 54	566, 144 54
Asst. treasurer U. S., Charleston, S. C..	41, 294 29		250, 000 00	291, 294 29	41, 294 29
Asst. treasurer U. S., Chicago, Ill.....	185, 475 38		820, 000 00	1, 005, 475 38	185, 475 38
Asst. treasurer U. S., Cincinnati, Ohio..	200, 380 84		240, 000 00	440, 380 84	200, 380 84
Asst. treasurer U. S., New Orleans, La..	106, 837 30		390, 000 00	496, 837 30	106, 837 30
Asst. treasurer U. S., New York, N. Y..	2, 857, 410 62	\$6, 439, 044 71	175, 000 00	9, 471, 455 33	9, 296, 455 33
Asst. treasurer U. S., Philadelphia, Pa..	512, 509 49		250, 000 00	762, 509 49	512, 509 49
Asst. treasurer U. S., San Francisco, Cal.	281, 330 83		100, 000 00	381, 330 83	281, 330 83
Asst. treasurer U. S., Saint Louis, Mo....	127, 431 17		650, 000 00	777, 431 17	127, 431 17
Designated depository, Buffalo, N. Y....	3, 820 00			3, 820 00	3, 820 00
Designated depository, Pittsburgh, Pa..	562 49			562 49	562 49
Designated depository, Louisville, Ky....					
Designated depository, Mobile, Ala.....					
First Nat'l Bank, Dubuque, Iowa.....					
First Nat'l Bank, Galveston, Tex.....	1, 010 44			1, 010 44	1, 010 44
First Nat'l Bank, Leavenworth, Kans..	2, 162 46			2, 162 46	2, 162 46
First Nat'l Bank, Memphis, Tenn.....	1, 286 35			1, 286 35	1, 286 35
First Nat'l Bank, New Albany, Ind.....					
First Nat'l Bank, Portland, Oreg.....	491 73			491 73	491 73
First Nat'l Bank, Richmond, Va.....					
First Nat'l Bank, Springfield, Ill.....	5, 289 65			5, 289 65	5, 289 65
First Nat'l Bank, Trenton, N. J.....					
First Nat'l Bank, Cincinnati, Ohio.....	505 95			505 95	505 95
First Nat'l Bank, Milwaukee, Wis.....	151 00			151 00	151 00
First Nat'l Bank, Saint Paul, Minn.....	232 10			232 10	232 10
First Nat'l Bank, Nashville, Tenn.....	113 31			113 31	113 31
Second Nat'l Bank, Detroit, Mich.....					
Second Nat'l Bank, Leavenworth, Kans..					
Second Nat'l Bank, New Haven, Conn....					
Second Nat'l Bank, Utica, N. Y.....	352 35			352 35	352 35
City Nat'l Bank, Grand Rapids, Mich..	956 44			956 44	956 44
Merchants' Nat'l Bank, Savannah, Ga..	31, 610 13			31, 610 13	31, 610 13
Merchants' Nat'l Bank, Cleveland, Ohio.	1, 134 39			1, 134 39	1, 134 39
Merchants' Nat'l Bank, Little Rock, Ark.	470 72			470 72	470 72
East Tenn. Nat'l Bank, Knoxville, Tenn.					
National Bank of Lawrence, Kans.....					
Atlanta National Bank, Atlanta, Ga....	1, 038 01			1, 038 01	1, 038 01
Indianapolis N'l Bank, Indianapolis, Ind	2, 424 96			2, 424 96	2, 424 96
Lynchburgh N'l Bank, Lynchburgh, Va..	116 25			116 25	116 25
Raleigh Nat'l Bank, Raleigh, N. C.....	555 03			555 03	555 03
San Antonio N'l Bank, San Antonio, Tex.	283 44			283 44	283 44
Omaha Nat'l Bank, Omaha, Nebr.....	7, 150 43			7, 150 43	7, 150 43
Total .....	5, 551, 968 57	6, 439, 044 71	3, 752, 273 28	15, 749, 284 66	11, 991, 011 28

## Comparative statement between fiscal years

Deposits for fiscal year of 1874 .....	\$5, 551, 968 57
Deposits for fiscal year of 1873 .....	4, 087, 273 57
Gain in deposits for 1874.....	1, 464, 693 00
Grants from the Treasury for 1874.....	\$6, 439, 044 71
Grants from the Treasury for 1873.....	4, 590, 475 00
	1, 848, 569 71
Add gain in deposits for 1874.....	1, 464, 693 80
Aggregate receipts for 1874.....	11, 991, 011 28
Aggregate receipts for 1873.....	8, 677, 747 57
Increase of receipts for 1874.....	3, 313, 263 51
Increase of receipts for 1874 .....	3, 409, 587 57
Deduct decrease of receipts for 1874.....	96, 322 57
Increase for 1874, as shown above.....	3, 313, 263 51



depositories during the fiscal year ended June 30, 1874.

Increase of receipts over 1873.	Decrease of receipts from 1873.	Warrants drawn.	Increase over 1873.	Decrease from 1873.	Transfer account.		Balance subject to draft June 30, 1874.
					From—	To—	
\$29,550 12		\$284,797 66	\$344,788 58		\$15,000 00	\$603,273 28	\$160,788 87
30,132 55		395,949 01	110,148 59			280,000 00	49,077 97
15,189 21		238,292 52		\$369,691 70	335,000 00		28,992 11
	\$6,242 01	272,631 51	784 12			250,000 00	20,241 80
185,340 98		962,109 31	962,109 31			820,000 00	43,500 47
200,380 84		394,967 81	394,967 81			240,000 00	45,413 03
1,369 02		482,083 69		10,034 59		390,000 00	15,034 17
2,502,425 38		6,217,256 82	556,491 95		3,225,000 00	175,000 00	70,685 05
25,331 19		567,569 68		5,895 33	130,000 00	250,000 00	88,309 70
26,580 67		347,261 30	37,321 87			100,000 00	48,138 12
	46,517 95	797,068 03		170,741 12		650,000 00	1,899 63
3,351 07					3,202 65		700 00
	2,921 40				642 52		372 48
	515 00				515 00		
	29,752 81						
	415 91						
583 48					1,089 94		
1,583 91					831 87		1,330 59
	1,948 19				3,044 23		
	177 00						
416 73					340 14		151 59
	157 99						
5,157 47					432 18		4,989 65
	78 17						
505 95					505 95		
151 00					151 00		
232 10							232 10
113 31							113 31
	3,527 13						
	156 70						
	500 00						
352 35					352 35		
956 44					956 44		
	1,321 15				27,729 93		5,150 00
116 40					1,576 18		102 50
	80 61				470 72		
	114 44						
	55 59				55 59		
838 01					919 82		118 19
1,774 92					2,474 21		123 00
12 75							116 25
	1,585 47						555 03
	265 25				832 13		
7,150 43					7,150 43		
409,596 28	96,332 77	11,559,987 34	2,406,612 23	556,362 74	3,758,273 28	3,758,273 28	586,135 61

1873 and 1874 at Treasury depositories.

Warrants drawn for 1874.....	\$11,559,987 34	
Warrants drawn for 1873.....	9,709,737 85	
Increase of warrants for 1874.....		\$2,406,612 23
educt decrease of warrants for 1874.....		556,362 74
Increase for 1874.....	1,850,249 49	1,850,249 49
Balance subject to draft June 30, 1874.....		586,135 61
Balance subject to draft June 30, 1873.....		154,600 86
Increase for 1874.....		431,534 75
Total number of warrants issued during fiscal year of 1874.....		10,649
Total number of warrants issued during fiscal year of 1873.....		8,005
Increase for 1874.....		2,644

EDWARD W. BARBER,  
Third Assistant Postmaster-General.

REPORT OF THE POSTMASTER-GENERAL.

No. 6.—Receipts and disbursements at depository post-offices on account fiscal year ended June 30 1874.

Offices.	State.	Proceeds.	Deposits.	Collec- tions.	Aggregate accumulation.	Amount subject to draft June 30, 1873.	Credit balance June 30, 1873.	Total.	Disburse- ments.	Amount subject to draft June 30, 1874.	Credit balance, June 30, 1874.
Albany .....	New York .....	\$72,250 37	\$76,113 11	\$50 73	\$148,414 21	\$23,132 11	.....	\$171,546 32	\$145,216 88	\$26,329 44	.....
Atlanta .....	Georgia .....	25,195 50	8,157 91	4 00	33,357 41	2,545 31	.....	35,902 72	35,353 11	549 61	.....
Bangor .....	Maine .....	16,914 70	9,669 87	2 33	26,586 90	1,937 94	.....	28,524 84	26,103 64	2,421 20	.....
Binghamton .....	New York .....	18,910 41	6,723 07	24 63	25,638 11	3,907 53	.....	29,565 64	21,839 26	7,726 38	.....
Batavia .....	do .....	4,261 02	267 65	440 39	4,969 06	738 38	.....	5,707 44	2,676 84	3,030 60	.....
Buffalo .....	do .....	103,629 00	17,777 26	62 66	121,528 92	2,537 43	.....	124,066 35	117,386 32	6,680 03	.....
Cleveland .....	Ohio .....	116,764 98	19,128 08	.....	135,893 06	14,068 53	.....	149,961 59	119,393 96	30,567 63	.....
Columbus .....	do .....	37,019 24	5,351 81	947 28	43,318 33	7,734 50	.....	51,052 83	39,620 25	11,432 58	.....
Concord .....	New Hampshire .....	13,653 27	21,000 16	211 88	34,865 31	5,783 51	.....	40,648 82	36,927 45	3,721 37	.....
Davenport .....	Iowa .....	18,145 67	2,931 07	.....	21,076 74	1,969 73	.....	23,066 47	23,158 37	.....	\$91 90
Des Moines .....	do .....	20,869 64	10,329 56	254 60	31,453 80	3,755 71	.....	35,209 51	28,806 48	6,403 03	.....
Detroit .....	Michigan .....	124,427 47	13,124 50	3,677 14	141,229 11	24,277 28	.....	165,506 39	148,188 72	17,317 67	.....
Dover .....	Delaware .....	1,562 59	1,197 25	.....	2,759 84	289 74	.....	3,049 58	2,683 85	365 73	.....
Dubuque .....	Iowa .....	19,660 47	16,105 98	56 79	35,823 24	3,645 54	.....	39,468 78	35,645 21	3,823 57	.....
Easton .....	Pennsylvania .....	8,356 44	1,142 72	19 61	9,518 77	1,094 92	.....	10,613 69	11,382 21	.....	768 52
Evansville .....	Indiana .....	13,974 24	6,239 91	80 70	20,293 85	4,128 15	.....	24,422 00	23,550 16	871 84	.....
Fort Wayne .....	do .....	14,286 65	6,933 18	.....	21,219 83	4,197 22	.....	25,417 05	22,254 44	3,162 61	.....
Geneva .....	New York .....	6,741 66	2,281 89	208 54	9,232 09	4,613 11	.....	13,845 20	9,025 57	4,819 63	.....
Grand Rapids .....	Michigan .....	25,743 28	6,036 61	.....	31,779 89	4,914 04	.....	36,693 93	32,355 84	4,338 09	.....
Harrisburgh .....	Pennsylvania .....	34,804 37	3,656 64	467 03	39,018 04	8,754 20	.....	47,772 24	41,281 91	6,490 33	.....
Hartford .....	Connecticut .....	77,446 23	19,234 22	4,251 92	100,932 37	6,599 90	.....	107,532 27	26,526 76	21,005 51	.....
Huntsville .....	Alabama .....	2,786 91	359 82	291 98	3,432 71	307 20	.....	3,745 91	3,321 85	424 06	.....
Indianapolis .....	Indiana .....	60,640 10	3,051 12	17 10	63,708 32	2,574 35	.....	66,282 67	62,783 18	3,499 49	.....
Kalamazoo .....	Michigan .....	9,335 40	3,176 22	402 32	12,913 94	1,832 99	.....	14,746 83	12,844 06	1,902 87	.....
Keene .....	New Hampshire .....	5,186 20	2,968 04	180 50	8,332 74	3,144 72	.....	11,477 46	10,649 64	827 82	.....
Knoxville .....	Tennessee .....	8,319 75	2,180 61	1,634 87	12,135 23	911 94	.....	13,047 17	11,388 89	1,658 48	.....
La Fayette .....	Indiana .....	10,829 39	4,226 24	95 04	15,150 67	3,553 26	.....	18,703 93	17,261 59	1,442 34	.....
Lancaster .....	New Hampshire .....	1,300 18	1,892 53	.....	3,192 71	552 73	.....	3,745 44	2,276 99	1,468 45	.....
Leavenworth .....	Kansas .....	21,874 76	3,600 02	3,682 33	39,157 11	1,265 94	.....	40,423 05	38,993 33	1,429 72	.....
Lexington .....	Kentucky .....	10,212 00	5,201 68	1,044 15	16,457 83	1,214 75	.....	17,672 58	14,226 04	3,446 54	.....
Lima .....	Ohio .....	3,421 76	1,086 14	19 50	4,527 40	2,272 17	.....	6,799 57	6,186 44	613 13	.....
Louisville .....	Kentucky .....	107,178 84	5,280 83	311 70	112,771 37	5,926 22	.....	118,697 59	109,538 94	9,158 65	.....
Lowell .....	Massachusetts .....	29,851 94	1,990 74	.....	31,842 68	9,748 33	\$325 87	41,591 01	39,498 12	2,092 89	740 38
Madison .....	Wisconsin .....	15,968 00	3,217 61	.....	19,185 61	.....	.....	18,859 74	19,600 12	.....	251 19
Meadville .....	Pennsylvania .....	7,340 24	3,406 95	1,940 73	12,687 92	1,439 92	.....	14,127 84	14,379 03	1,627 99	.....
Memphis .....	Tennessee .....	51,351 06	17,175 50	23,761 01	92,287 57	3,958 04	.....	96,245 61	94,617 62	11,698 79	.....
Milwaukee .....	Wisconsin .....	115,238 26	27,935 99	1,520 46	144,714 71	9,512 19	.....	154,226 90	142,328 11	.....	1,474 54
Mobile .....	Alabama .....	32,118 49	4,000 45	298 06	37,023 40	1,425 58	.....	38,448 98	39,923 56	.....	.....
Montpelier .....	Vermont .....	4,760 45	4,003 54	102 18	8,803 17	1,405 72	.....	10,271 89	6,774 40	3,497 49	.....
Nashville .....	Tennessee .....	29,774 18	14,113 07	801 73	44,744 94	401 18	.....	45,150 16	40,833 40	4,316 67	.....
New York .....	New Jersey .....	70,157 37	17,261 31	73 45	88,042 50	10,213 51	.....	98,208 03	67,467 28	30,438 76	.....
Philadelphia .....	Connecticut .....	64,113 05	33,271 75	401 10	98,140 50	6,330 97	.....	104,017 47	74,017 54	30,439 63	.....
.....	New York .....	.....	4,111 71	9,171 59	13,601 73	1,344 95	.....	15,223 93	12,004 15	2,551 89	.....

Pittsburg	1,640 29	2,848 02	.....	4,508 91	944 27	.....	5,513 14	5,172 60	3,355 54	.....
Pittsburgh	24,794 90	7,940 57	.....	32,735 47	4,007 34	.....	36,742 85	31,782 60	1,900 25	.....
Plattburgh	102,023 22	20,455 94	.....	122,700 57	9,810 08	.....	232,516 65	192,175 94	30,340 71	.....
Portland	4,036 79	1,991 44	.....	6,028 27	2,162 75	.....	8,191 02	6,727 25	1,463 17	.....
Portland	54,567 29	27,373 54	.....	81,941 24	12,544 90	.....	94,566 14	81,679 29	9,886 89	.....
Portsmouth	6,663 82	8,256 90	.....	15,139 79	984 31	.....	16,124 10	15,052 43	1,071 67	.....
Providence	106,928 05	25,862 87	.....	132,891 82	17,891 79	.....	150,783 61	116,816 54	33,967 07	.....
Quincy	19,161 30	3,321 04	.....	26,162 34	811 70	.....	26,994 04	25,913 19	1,080 85	.....
Raleigh	9,785 91	4,004 63	.....	16,682 44	1,715 33	.....	18,397 77	17,278 78	1,118 99	.....
Richmond	53,942 72	8,926 77	.....	63,622 60	4,900 22	.....	67,892 82	62,369 19	5,523 63	.....
Ripon	2,151 49	311 29	.....	2,728 19	662 02	.....	3,390 21	2,329 58	1,060 63	.....
Rochester	82,317 37	16,815 12	.....	105,464 74	16,480 23	.....	121,944 97	105,954 64	15,990 33	.....
Rutland	5,403 84	6,760 42	.....	12,410 90	1,733 14	.....	14,144 04	14,054 99	89 05	.....
Saint Paul	25,554 46	16,883 73	.....	43,547 58	6,038 29	.....	49,585 87	47,299 76	2,286 11	.....
Sandusky	25,699 51	1,755 98	.....	27,471 03	547 58	.....	28,018 61	24,996 78	3,021 83	.....
Scranton	14,579 63	28,695 89	.....	43,650 98	4,264 40	.....	47,915 38	45,029 14	2,886 24	.....
Springfield	16,706 26	16,567 03	.....	33,293 14	1,276 34	.....	34,569 48	32,600 88	1,968 60	.....
Springfield	43,459 09	36,418 97	.....	80,232 06	9,998 51	.....	90,230 57	72,852 76	17,377 81	.....
Steubenville	6,403 75	3,024 72	.....	9,484 47	2,912 56	.....	12,397 03	9,494 79	2,902 24	.....
Syracuse	51,401 36	15,139 03	.....	66,543 72	15,495 26	.....	82,037 98	67,635 98	14,402 00	.....
Urbana	5,363 27	598 92	.....	6,217 01	944 47	.....	7,161 42	3,176 31	3,925 17	.....
Utica	38,222 56	11,985 14	.....	50,357 52	9,417 03	.....	59,774 55	47,920 64	11,853 91	.....
Vincennes	2,532 31	2,375 39	.....	5,285 55	7 46	.....	5,293 04	4,705 75	587 29	.....
Wheeling	14,743 68	4,379 68	.....	19,129 53	2,422 72	.....	21,552 25	16,750 40	4,801 85	.....
Williamsport	14,571 21	2,934 06	.....	17,552 62	2,469 68	.....	20,022 30	14,115 75	5,906 55	.....
Woonster	4,122 74	1,761 69	.....	5,884 43	2,970 37	.....	8,854 80	4,293 00	4,561 80	.....
Worcester	53,039 73	18,379 59	.....	71,465 94	9,089 84	.....	80,555 78	71,302 04	9,253 74	.....
Zanesville	12,879 34	1,617 82	.....	14,691 43	4,580 71	.....	19,272 14	9,828 01	9,444 13	.....
Miscellaneous	.....	76,639 18	.....	76,639 18	.....	.....	76,639 18	76,639 18	.....	.....
Total	2,322,401 75	798,303 39	85,899 17	3,206,604 31	346,618 08	326 87	3,552,896 52	3,083,149 19	473,073 90	3,326 57

EDWARD W. BARBER,  
Third Assistant Postmaster-General.

No. 7.—Postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards issued during the fiscal year ended June 30, 1874.

ORDINARY POSTAGE-STAMPS.

Quarter ended—	NUMBER AND DENOMINATIONS OF STAMPS.										Value.	
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.		90-cent.
September 30, 1873 .....	21, 545, 600	11, 365, 050	106, 718, 300	2, 953, 950	229, 700	832, 490	316, 475	495, 140	54, 125	55, 420	10, 680	\$4, 072, 347 00
December 31, 1873.....	25, 641, 700	17, 247, 600	108, 041, 600	2, 636, 550	231, 100	827, 010	281, 050	324, 100	86, 675	126, 130	17, 980	4, 256, 852 00
March 31, 1874.....	31, 548, 400	14, 689, 500	115, 068, 100	3, 394, 050	413, 700	1, 028, 360	330, 825	85, 700	102, 500	100, 040	17, 040	4, 519, 257 00
June 30, 1874.....	32, 338, 200	16, 790, 100	111, 708, 600	3, 014, 300	351, 300	1, 183, 570	376, 375	49, 100	42, 075	44, 890	18, 270	4, 426, 786 00
Total.....	111, 073, 900	60, 092, 250	441, 536, 600	11, 998, 850	1, 225, 800	3, 871, 430	1, 304, 725	954, 040	285, 375	326, 480	63, 970	17, 275, 242 00

ORDINARY STAMPED ENVELOPES AND NEWSPAPER-WRAPPERS, PLAIN.

Quarter ended—	NUMBER AND DENOMINATIONS OF ENVELOPES.										NEWSPAPER-WRAP- PERS.		Value.
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	1-cent.	2-cent.	
September 30, 1873.....	2, 262, 750	599, 250	12, 265, 950	36, 450	750	1, 750	5, 000	250	.....	.....	3, 885, 750	.....	\$500, 933 30
December 31, 1873 .....	2, 831, 500	589, 250	11, 848, 250	50, 250	.....	11, 000	2, 500	.....	.....	.....	4, 267, 250	200, 000	504, 997 94
March 31, 1874.....	3, 009, 000	650, 000	13, 763, 100	51, 350	500	15, 250	.....	.....	.....	.....	5, 437, 000	.....	580, 959 26
June 30, 1874 .....	3, 312, 750	684, 250	13, 022, 900	36, 250	.....	1, 250	8, 000	1, 000	500	500	5, 560, 750	.....	581, 563 86
Total.....	11, 416, 000	2, 522, 750	50, 946, 200	174, 300	1, 250	29, 250	15, 500	1, 250	500	500	19, 170, 750	200, 000	2, 148, 454 36

Quarter ended—	NUMBER AND DENOMINATIONS OF ENVELOPES.							Value.
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	
September 30, 1873.....	226, 250	271, 000	12, 814, 750	34, 500	.....	.....	500	\$445, 475 85
December 31, 1873.....	207, 000	250, 000	11, 670, 000	42, 750	.....	.....	.....	406, 488 35
March 31, 1874.....	227, 500	334, 500	12, 714, 500	41, 000	500	1, 000	.....	444, 258 05
June 30, 1874.....	232, 500	323, 000	12, 496, 000	51, 500	.....	.....	1, 500	437, 516 15
Total.....	893, 250	1, 178, 500	49, 695, 250	169, 750	500	1, 000	2, 000	1, 733, 738 40

POSTAL CARDS.

Quarter ended—	Number of cards.	Value.
September 30, 1873.....	33, 208, 300	\$332, 083 00
December 31, 1873.....	16, 283, 500	162, 835 00
March 31, 1874.....	19, 414, 700	194, 147 00
June 30, 1874.....	22, 172, 500	221, 725 00
Total.....	91 079, 000	910, 750 00

OFFICIAL POSTAGE-STAMPS.

Quarter ended—	NUMBER AND DENOMINATIONS OF STAMPS.											Value.				
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	90-cent.	\$2.	\$5.	\$10.	\$20.	
Sept. 30, 1873.....	1, 780, 900	1, 794, 900	12, 682, 200	1, 762, 250	129, 200	223, 410	683, 400	552, 060	180, 475	144, 650	59, 913	363	363	363	363	\$896, 213 70
Dec. 31, 1873.....	67, 000	160, 200	2, 173, 700	224, 850	3, 500	66, 200	125, 450	15, 500	21, 500	23, 000	7, 275	100	.....	.....	.....	125, 627 50
Mar. 31, 1874.....	104, 000	52, 200	3, 279, 400	221, 850	600	77, 600	34, 950	28, 600	38, 450	53, 700	28, 050	.....	.....	.....	.....	189, 766 00
June 30, 1874.....	79, 500	91, 300	4, 464, 600	598, 150	6, 500	70, 200	53, 250	30, 200	23, 250	23, 050	11, 000	.....	.....	.....	.....	213, 238 00
Total.....	2, 031, 400	2, 104, 600	22, 599, 900	2, 807, 100	140, 400	497, 410	897, 050	626, 360	263, 675	244, 400	106, 238	463	363	363	363	1, 415, 845 20

No. 7.—Postage-stamps, stamped envelopes, newspaper-wrappers, &c.—Continued.  
OFFICIAL STAMPED ENVELOPES AND NEWSPAPER-WRAPPERS.

Quarter ended--	NUMBER AND DENOMINATIONS OF ENVELOPES.										NEWSPAPER-WRAPPERS.		Value.
	1-cent.	2-cent.	3-cent.	6-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	1-cent.	2-cent.		
Sept. 30, 1873 .....	2,000	179,500	4,591,200	141,100	500	5,500	1,500	1,000	500	500,600	.....	\$157,322 56	
Dec. 31, 1873 .....	.....	91,000	1,095,150	36,400	.....	.....	.....	.....	.....	400,000	200	41,382 76	
Mar. 31, 1874 .....	.....	67,000	1,810,650	48,600	.....	.....	.....	.....	.....	500,000	100	64,250 03	
June 30, 1874 .....	.....	227,600	2,508,000	41,700	.....	300	.....	.....	100	650,100	.....	90,501 31	
Total.....	2,000	565,100	10,005,000	267,800	500	5,800	1,500	1,000	600	2,050,700	300	353,456 66	

RECAPITULATION.

Description.	Whole number.	Value.
Postage-stamps, ordinary .....	632,733,420	\$17,275,242 00
Stamped envelopes, plain .....	65,107,500	1,927,952 30
Stamped envelopes, request .....	51,940,250	1,733,738 40
Newspaper-wrappers, ordinary .....	19,370,750	220,502 06
Postal cards .....	91,079,000	910,790 00
Official postage-stamps .....	32,320,085	1,415,845 20
Official stamped envelopes and wrappers .....	12,900,300	353,456 66
Aggregate .....	9 05,451,305	23,837,526 62

EDWARD W. BARRER,  
Third Assistant Postmaster-General.



No. 8.—*Postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards issued during the fiscal year ended June 30, 1874.*

Description.	Quarter end- ed Septem- ber 30, 1873.	Quarter end- ed Decem- ber 31, 1873.	Quarter end- ed March 31, 1874.	Quarter end- ed June 30, 1874.	Total.
<i>Ordinary postage-stamps.</i>					
One-cent .....	21, 545, 600	25, 641, 700	31, 548, 400	32, 338, 200	111, 073, 900
Two-cent .....	11, 365, 050	17, 247, 600	14, 689, 500	16, 790, 100	60, 092, 250
Three-cent .....	106, 718, 300	108, 041, 600	115, 068, 100	111, 708, 600	441, 536, 600
Six-cent .....	2, 953, 950	2, 636, 550	3, 394, 050	3, 014, 300	11, 998, 850
Seven-cent .....	229, 700	231, 100	413, 700	351, 300	1, 225, 800
Ten-cent .....	832, 490	827, 010	1, 028, 360	1, 183, 570	3, 871, 430
Twelve-cent .....	316, 475	281, 050	330, 825	376, 375	1, 304, 725
Fifteen-cent .....	495, 140	324, 100	85, 700	49, 100	954, 040
Twenty-four-cent .....	54, 125	86, 675	102, 500	42, 075	285, 375
Thirty-cent .....	55, 420	126, 130	100, 040	44, 890	326, 480
Ninety-cent .....	10, 680	17, 980	17, 040	18, 270	63, 970
Value .....	\$4, 072, 347 00	\$4, 256, 852 00	\$4, 519, 257 00	\$4, 426, 786 00	\$17, 275, 242 00
<i>Ordinary stamped envelopes and newspaper-wrappers, plain.</i>					
One-cent .....	2, 262, 750	2, 831, 500	3, 009, 000	3, 312, 750	11, 416, 000
Two-cent .....	599, 250	589, 250	650, 000	624, 250	2, 522, 750
Three-cent .....	12, 265, 950	11, 822, 250	13, 763, 100	13, 028, 900	50, 946, 200
Six-cent .....	36, 450	50, 250	51, 350	36, 250	174, 300
Seven-cent .....	750	.....	500	.....	1, 250
Ten-cent .....	1, 750	11, 000	15, 250	1, 250	29, 250
Twelve-cent .....	5, 000	2, 500	.....	8, 000	15, 500
Fifteen-cent .....	250	.....	.....	1, 000	1, 250
Twenty-four-cent .....	.....	.....	.....	500	500
Thirty-cent .....	.....	.....	.....	500	500
One-cent wrappers .....	3, 885, 750	4, 267, 250	5, 437, 000	5, 520, 750	19, 170, 750
Two-cent wrappers .....	.....	200, 000	.....	.....	200, 000
Value .....	\$500, 933 30	\$504, 997 94	\$520, 959 26	\$561, 563 86	\$2, 148, 454 36
<i>Stamped envelopes bearing a request to return.</i>					
One-cent .....	226, 250	207, 000	227, 500	232, 500	893, 250
Two-cent .....	271, 000	250, 000	334, 500	323, 000	1, 178, 500
Three-cent .....	12, 814, 750	11, 670, 000	12, 714, 500	12, 496, 000	49, 695, 250
Six-cent .....	34, 500	42, 750	41, 000	51, 500	169, 750
Seven-cent .....	.....	.....	500	.....	500
Ten-cent .....	.....	.....	1, 000	.....	1, 000
Twelve-cent .....	500	.....	.....	1, 500	2, 000
Value .....	\$445, 475 85	\$406, 482 35	\$444, 258 05	\$437, 516 15	\$1, 733, 738 40
<i>Postal cards.</i>					
One-cent .....	33, 208, 300	16, 283, 500	19, 414, 700	22, 172, 500	91, 079, 000
Value .....	\$332, 083 00	\$162, 835 00	\$194, 147 00	\$221, 725 00	\$910, 790 00
<i>Official postage-stamps.</i>					
One-cent .....	1, 780, 900	67, 000	104, 000	79, 500	2, 031, 400
Two-cent .....	1, 794, 900	160, 200	58, 200	91, 300	2, 104, 600
Three-cent .....	12, 682, 200	2, 173, 700	3, 279, 400	4, 464, 600	22, 599, 900
Six-cent .....	1, 762, 250	224, 850	221, 850	598, 150	2, 807, 100
Seven-cent .....	129, 800	3, 500	600	6, 500	140, 400
Ten-cent .....	223, 410	66, 200	77, 600	70, 200	497, 410
Twelve-cent .....	683, 400	125, 450	34, 950	53, 250	897, 050
Fifteen-cent .....	552, 060	15, 500	28, 600	30, 200	626, 360
Twenty-four-cent .....	180, 475	21, 500	32, 450	23, 250	263, 675
Thirty-cent .....	144, 650	23, 000	53, 700	23, 050	244, 400
Ninety-cent .....	59, 913	7, 275	28, 050	11, 000	106, 238
Two-dollar .....	363	100	.....	.....	463
Five-dollar .....	363	.....	.....	.....	363
Ten-dollar .....	363	.....	.....	.....	363
Twenty-dollar .....	363	.....	.....	.....	363
Value .....	\$896, 213 70	\$125, 627 50	\$180, 766 00	\$213, 238 00	\$1, 415, 845 20
<i>Official stamped envelopes.</i>					
One-cent .....	2, 000	.....	.....	.....	2, 000
Two-cent .....	179, 500	91, 000	67, 000	227, 600	565, 100
Three-cent .....	4, 591, 200	1, 095, 150	1, 810, 650	2, 502, 000	10, 005, 000

No. 8.—*Postage-stamps, stamped envelopes, &c.*—Continued.

Description.	Quarter end- ed Septem- ber 30, 1873.	Quarter end- ed Decem- ber 31, 1873.	Quarter end- ed March 31, 1874.	Quarter end- ed June 30, 1874.	Total
<i>Official stamped envelopes— Continued.</i>					
Six-cent .....	141, 100	36, 400	43, 600	41, 700	262, 800
Ten-cent .....	500				500
Twelve-cent .....	5, 500			300	5, 800
Fifteen-cent .....	1, 500				1, 500
Twenty-four-cent .....	1, 000				1, 000
Thirty-cent .....	500			100	600
One-cent wrappers .....	500, 600	400, 000	500, 000	650, 100	2, 050, 700
Two-cent wrappers .....		200	100		300
Value .....	\$157, 322 56	\$41, 382 76	\$64, 250 03	\$90, 501 31	\$353, 456 66

RECAPITULATION.

Description.	Number.	Value.
Ordinary postage-stamps .....	632, 733, 420	\$17, 275, 242 1/2
Ordinary stamped envelopes, plain .....	65, 107, 500	1, 927, 850 00
Ordinary stamped envelopes, request .....	51, 940, 250	1, 753, 750 00
Total ordinary stamped envelopes .....	117, 047, 750	3, 681, 600 00
Newspaper-wrappers .....	19, 370, 750	220, 500 00
Postal cards .....	91, 079, 000	910, 700 00
Official postage-stamps .....	32, 320, 085	1, 415, 845 00
Official stamped envelopes .....	12, 900, 300	353, 456 66
Whole number and value of stamps, stamped envelopes, wrappers, and cards .....	905, 451, 305	23, 877, 743 66

EDWARD W. BARBER  
Third Assistant Postmaster-General

OFFICIAL POSTAGE-STAMPS.

Names of Departments.	NUMBER AND DENOMINATIONS OF STAMPS.												Value.			
	1-cent.	2-cent.	3-cent.	6-cent.	7-cent.	10-cent.	12-cent.	15-cent.	24-cent.	30-cent.	90-cent.	\$2.		\$5.	\$10.	\$20.
Executive .....	1,000	2,100	9,100	1,900	7,800	1,550	5,800	5,800	5,800	5,800	2,043	463	363	363	363	\$400 00
State .....	9,800	9,800	25,800	13,800	7,800	7,800	5,800	5,800	5,800	5,800	2,043	463	363	363	363	23,389 70
Treasury .....	1,000,000	1,944,500	4,350,000	1,315,000	120,000	250,000	483,000	433,000	100,000	96,500	50,500	.....	.....	.....	.....	409,000 00
War .....	187,300	70,300	223,300	116,950	6,600	20,600	18,000	17,700	19,900	15,750	4,650	.....	.....	.....	.....	38,078 00
Navy .....	32,800	48,350	110,700	58,800	6,000	13,210	22,300	12,500	10,000	8,600	2,070	.....	.....	.....	.....	21,179 00
Post-Office .....	632,300	399,250	16,906,000	787,950	.....	77,500	218,800	67,860	47,900	37,600	30,150	.....	.....	.....	.....	663,037 00
Interior .....	108,600	227,900	854,000	425,700	.....	71,750	122,850	71,500	49,275	46,150	16,525	.....	.....	.....	.....	129,991 50
Justice .....	9,000	7,400	39,000	27,000	.....	3,000	7,500	4,000	1,000	2,000	300	.....	.....	.....	.....	5,890 00
Agriculture .....	60,000	95,000	60,000	60,000	.....	50,000	18,000	14,000	30,000	32,000	.....	.....	.....	.....	.....	34,680 00
Total .....	2,031,400	2,104,600	22,599,900	2,807,100	140,400	497,410	897,050	636,300	263,675	244,400	106,238	463	363	363	363	1,415,845 20

OFFICIAL STAMPED ENVELOPES.

Names of Departments.	NUMBER AND DENOMINATIONS OF ENVELOPES.										NEWSPAPER WHARF-PRICES.		Value.
	1-cent.	2-cent.	ent.	12-cent.	15-cent.	24-cent.	30-cent.	1-cent.	2-cent.				
War .....	2,000	2,100	500	5,800	1,500	1,000	600	2,050,700	300	\$36,493 68			
Post-Office.....		563,000	.....	.....	.....	.....	.....	.....	.....	316,983 00			
Total .....	2,000	565,100	500	5,800	1,500	1,000	600	2,050,700	300	353,456 06			

EDWARD W. BARBER,  
Third Assistant Postmaster-General.

No. 10.—Statement showing the increase in the issue of postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards for the year ended June 30, 1874, over the preceding year, exclusive of the issues for official use.

Description.	1873.		1874.		Increase.		Per cent. increase.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.		
Postage-stamps .....	601, 931, 520	\$16, 681, 189 00	632, 733, 420	\$17, 275, 242 00	30, 801, 900	\$594, 053 00	5. 11 +	3. 56 +
Stamped envelopes, plain .....	65, 014, 600	1, 722, 512 00	65, 107, 500	1, 927, 952 30	92, 900	205, 440 30	0. 14 +	11. 92 +
Stamped envelopes, request.....	52, 201, 250	1, 544, 567 50	51, 940, 250	1, 733, 738 40	*261, 000	189, 170 90	*0. 49 +	12. 24 +
Newspaper-wrappers .....	13, 956, 750	140, 567 50	19, 370, 750	220, 502 06	5, 414, 000	79, 934 56	38. 79 +	56. 86 +
Postal cards.....	31, 094, 000	310, 940 00	91, 079, 000	910, 790 00	59, 985, 000	599, 850 00	192. 91 +	192. 91 +
Aggregate .....	764, 198, 120	20, 399, 766 00	860, 230, 920	22, 068, 224 76	96, 032, 800	1, 668, 448 76	12. 56 +	8. 17 +

\* Decrease.

EDWARD W. BARBER,  
Third Assistant Postmaster-General.

No. 11.—Statement showing the increase in the issue of postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards, including the issues for official use, for the year ended June 30, 1874, over the issues of the preceding year.

Description.	1873.		1874.		Increase.		Per cent. increase.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.		
Ordinary postage-stamps.....	601,931,520	\$16,681,189 00	632,733,420	\$17,275,242 00	30,801,900	\$594,053 00	5.11+	3.56+
Ordinary stamped envelopes, plain .....	65,014,600	1,722,512 00	65,107,500	1,927,952 30	92,900	205,440 30	0.14+	11.92+
Stamped envelopes, request.....	52,201,250	1,544,567 50	51,940,250	1,733,738 40	*261,000	189,170 90	*0.49+	12.24+
Newspaper-wrappers .....	13,956,750	140,567 50	19,370,750	220,502 06	5,414,000	79,934 56	38.79+	56.86+
Postal cards .....	31,094,000	310,940 00	91,079,000	910,790 00	59,985,000	599,850 00	192.91+	192.91+
Total .....	764,198,120	20,399,776 00	860,230,920	22,068,224 76	96,032,800	1,668,448 76	12.56+	8.17+
Add official stamps and stamped envelopes .....	.....	.....	45,220,385	1,769,301 86	45,220,385	1,769,301 86	.....	.....
Aggregate .....	764,198,120	20,399,776 00	905,451,305	23,837,526 62	141,253,185	3,437,750 62	18.48+	16.85+

\* Decrease.

EDWARD W. BARBER,  
Third Assistant Postmaster-General.

No. 12. -Statement showing the number of dead-letters received and disposed of during the fiscal year ended June 30, 1874.

Character.	Received.		Delivered.		Filed.		Outstanding or not acted upon.		Destroyed.
	Number.	Actual or nominal value.	Number.	Actual or nominal value.	Number.	Actual or nominal value.	Number.	Actual or nominal value.	Number
Containing \$1 or more, (from last fiscal year) .....	3, 918	\$17, 966 17	12, 447	\$37, 480 64	3, 586	\$4, 771 38	3, 931	\$12, 156 15	.....
Containing \$1 or more .....	15, 050	60, 442 01	.....	.....	.....	.....	.....	.....	.....
Containing less than \$1, (from last fiscal year) .....	2, 470	888 14	7, 810	2, 380 77	2, 470	689 14	9, 674	2, 849 90	.....
Containing less than \$1 .....	17, 424	5, 230 67	1, 151	8, 307 57	86	495 51	65	391 70	.....
Registered, containing money .....	1, 382	9, 194 78	916	.....	154	.....	21	.....	.....
Registered, containing no money .....	1, 091	.....	3, 624	.....	.....	.....	.....	.....	.....
Registered, foreign .....	3, 824	.....	18, 620	3, 841, 609 48	974	220, 223 69	3, 736	471, 979 25	.....
Containing checks drafts bills of exchange, &c. ....	23, 320	4, 543, 907 31	9, 567	.....	4, 140	.....	300	.....	.....
Containing property .....	14, 007	.....	29, 797	.....	8, 970	.....	.....	.....	.....
Containing .....	38, 767	.....	27, 650	.....	2, 823	.....	190	.....	.....
Containing .....	30, 663	.....	34, 378	.....	2, 650	.....	.....	.....	.....
Containing .....	37, 028	.....	1, 020, 171	.....	.....	.....	516, 493	.....	.....
Containing .....	1, 831, 364	.....	.....	.....	.....	.....	.....	.....	1314, 700
Containing .....	2, 308, 219	.....	.....	.....	.....	.....	.....	.....	2, 308, 219
Total domestic .....	4, 348, 473	4, 637, 429 08	1, 166, 331	3, 909, 868 46	24, 863	240, 183 62	534, 380	467, 377 06	2, 622, 919
Foreign letters returned unopened .....	253, 300	.....	285, 883	.....	.....	.....	27, 407	.....	.....
Total domestic and foreign .....	4, 601, 773	4, 637, 429 08	1, 452, 224	3, 909, 868 46	24, 863	240, 183 62	561, 787	467, 377 06	2, 622, 919

\* Returned unopened to the countries where they originated.

† Returned unclaimed a second time.

EDWARD W. BARBER,

Third Assistant Postmaster-General.

No. 13.—Comparative statement of the operations of the Dead-Letter Office for the fiscal years from 1869 to 1874, inclusive.

Character.	1869.	1870.	1871.	1872.	1873.	1874.
Ordinary dead-letters received .....	2, 837, 472	2, 882, 868	2, 931, 244	2, 926, 012	2, 951, 281	3, 237, 794
Drop-letters received .....	450, 000	475, 300	492, 300	542, 804	657, 402	528, 105
* Unmailable letters received .....	388, 512	411, 600	400, 095	404, 229	385, 392	416, 236
Fictitious letters received .....	17, 417	86, 663	66, 264	35, 095	44, 318	43, 032
Registered letters received .....	3, 672	6, 153	6, 162	5, 152	2, 034	3, 411
Returned from abroad .....	62, 603	69, 461	77, 010	83, 422	93, 501	117, 295
Foreign origin .....	193, 186	220, 415	221, 673	244, 660	268, 420	253, 300
Total ... ..	3, 952, 862	4, 152, 460	4, 194, 748	4, 241, 374	4, 402, 348	4, 601, 773
Money-letters received .....	32, 350	45, 265	33, 553	31, 515	31, 048	40, 190
Money-letters received .....	\$98, 183.72	\$98, 661.42	\$82, 621.90	\$71, 562.48	\$65, 899.31	\$93, 521.77
Minor letters received .....	16, 925	17, 860	19, 193	19, 919	22, 312	23, 320
Minor letters received .....	\$3, 011, 354.71	\$3, 075, 544.90	\$3, 075, 869.23	\$3, 320, 300.38	\$5, 729, 864.80	\$4, 543, 907.31
Property letters received .....	9, 071	6, 921	6, 498	8, 456	10, 913	14, 007
Subminor letters received .....	114, 185	110, 920	111, 064	108, 315	115, 048	106, 458
Photographs .....	.....	38, 009	42, 119	43, 093	42, 903	38, 767
Receipts, bills lading, &c. ....	.....	27, 454	28, 196	26, 902	27, 656	30, 663
Stamps, souvenirs, &c. ....	.....	45, 457	40, 749	38, 270	44, 489	37, 028

\* As follows :

Held for postage .....	286, 307	312, 684	301, 472	312, 846	292, 710	327, 719
Misdirected .....	72, 999	68, 490	62, 373	62, 337	62, 994	58, 742
Blank .....	2, 678	3, 016	3, 518	4, 641	4, 622	3, 857
Hotel .....	26, 528	27, 410	26, 732	24, 405	25, 066	28, 518
Total .....	388, 512	411, 600	400, 095	404, 229	385, 392	418, 836

E. W. BARBER,  
Third Assistant Postmaster-General.



POST-OFFICE DEPARTMENT, CONTRACT-OFFICE,  
*Washington, D. C., October 31, 1874.*

SIR: For a statement of the mail-service for the contract-year ended June 30, 1874, &c., I have the honor to refer you to the tables hereto annexed.

Table A exhibits the character of the service, the length of routes, the number of miles of transportation, and the cost thereof, at the close of the contract-year.

Table B exhibits the railroad service, as in operation on the 30th of June, 1874; also the cost per mile in each State and Territory.

Table C exhibits the steamboat service, as in operation on the 30th of June, 1874.

Table D shows the increase and decrease of mail transportation and cost in the several States and Territories during the year ended June 30, 1874.

Table E shows the weight of the mails, the speed with which they are conveyed, the accommodations for mails and agents, the trips per week, and the rates of pay per mile per annum on railroad routes in the United States and Territories, the returns having been obtained with a view to the re-adjustment of the pay in accordance with the act of March 3, 1873.

Table F shows the re-adjustment, under the act of March 3, 1873, of the rates of pay per mile on certain railroad routes, and on certain new routes the adjustment of the rates based upon returns of the weight of the mails, the speed with which they are conveyed, the accommodations provided for mails and agents, and the number of trips per week.

Table G is a statement of the number, description, and cost of mail-bags and mail-catchers purchased by contract and put into service during the year ended June 30, 1874; also the number and cost of mail-locks and keys purchased and repaired during said year.

Table H is a list of railway post-office lines in the United States June 30, 1874, showing the increase in the service since June 30, 1873.

Through-mail tables, from 1 to 32, show the time occupied in the transmission of mails on a number of the leading and most important routes of the country for the year ended with the month of September, 1874.

Very respectfully, your obedient servant,

JOHN L. ROUTT,  
*Second Assistant Postmaster-General.*

HON. MARSHALL JEWELL,  
*Postmaster-General.*

## REPORT OF THE POSTMASTER-GENERAL.

A.—Table of mail-service for the year ended June 30, 1874, as exhibited by the state of the arrangements at the close of the year.

[The entire service and pay on each route are set down to the State under which the route is numbered, though extending sometimes into other States, instead of being divided among the States in which the different portions lie.]

States and Territories.	Length of routes.	Annual transportation and cost.						Total annual trans- portation by steam- boat.	Total annual trans- portation by rail- road.	Miles.	Total annual trans- portation.	Dollars.
		Celerity, certainty, and security.		By steamboat.		By railroad.						
		Miles.	Dollars.	Miles.	Dollars.	Miles.	Dollars.					
Maine.....	4,536	3,509	81,968	.....	.....	1,027	136,446	.....	986,466	2,601,612	218,414	
New Hampshire.....	1,719	1,012	24,867	89	2,678	618	64,407	28,756	700,643	1,184,247	95,952	
Vermont.....	2,225	1,577	49,960	.....	.....	648	100,455	.....	653,915	1,481,840	150,415	
Massachusetts.....	2,735	843	47,255	30	2,500	1,822	306,878	18,700	2,710,377	3,273,101	356,633	
Rhode Island.....	376	224	10,448	.....	.....	152	19,086	.....	274,032	383,544	29,534	
Connecticut.....	1,646	618	27,185	.....	.....	1,028	129,973	.....	1,774,331	2,130,193	157,158	
New York.....	12,101	6,255	259,810	195	9,200	5,651	1,159,514	139,707	8,524,431	11,803,216	1,428,524	
New Jersey.....	2,261	926	35,620	72	3,736	1,263	144,821	70,382	1,943,789	2,493,630	184,177	
Pennsylvania.....	13,981	10,021	292,612	88	6,011	3,872	439,525	46,020	5,758,092	9,843,078	738,148	
Delaware.....	433	195	6,277	.....	.....	238	18,707	.....	209,271	301,259	24,984	
Maryland.....	3,066	1,779	66,684	190	6,150	1,097	216,768	77,168	1,817,890	2,908,408	289,602	
West Virginia.....	5,227	4,605	58,045	250	13,320	365	33,428	104,888	227,788	1,271,324	104,793	
Virginia.....	9,808	7,353	125,548	991	51,307	1,464	207,095	366,000	1,525,344	3,753,123	363,990	
North Carolina.....	8,672	7,196	87,893	406	9,185	1,070	82,033	87,672	985,869	2,352,975	179,111	
South Carolina.....	3,884	2,514	29,701	51	1,460	1,315	117,936	8,944	1,242,562	1,579,327	149,097	
Georgia.....	6,452	3,905	59,254	224	4,894	2,323	181,342	39,416	2,286,257	2,937,271	245,490	
Florida.....	8,140	2,358	36,257	5,378	176,523	444	23,171	519,920	304,268	1,172,594	235,951	
Alabama.....	8,096	5,777	100,243	309	5,200	2,010	183,814	64,272	1,647,529	2,702,375	289,257	
Mississippi.....	5,828	4,455	79,672	260	7,500	1,113	150,128	54,080	1,050,024	1,851,182	237,300	
Louisiana.....	4,805	3,116	136,329	1,169	85,199	520	66,114	347,048	467,366	1,619,011	287,642	
Texas.....	13,233	11,135	490,220	658	82,750	1,440	108,848	203,077	929,903	3,748,601	681,818	
Arkansas.....	8,981	7,398	237,491	1,314	84,760	299	20,615	327,600	178,235	2,324,191	342,886	
Missouri.....	14,110	10,010	232,544	450	26,320	3,650	449,066	177,840	3,056,944	5,954,321	747,930	
Iennessee.....	6,133	4,750	70,723	155	14,500	1,228	149,459	96,720	1,278,498	2,379,322	254,682	
Kentucky.....	7,493	5,208	98,416	1,038	47,400	1,247	134,601	434,382	1,147,061	2,915,415	274,417	
Ohio.....	11,766	6,430	151,086	280	13,800	5,056	845,962	103,771	5,245,062	7,577,101	1,010,844	
Indiana.....	7,682	4,732	80,067	.....	.....	2,940	323,597	.....	3,192,946	4,330,994	403,654	
Illinois.....	11,673	5,832	108,594	.....	.....	6,441	843,435	105,309	7,401,844	8,994,103	959,439	
Michigan.....	9,222	4,834	113,609	997	96,765	3,371	262,930	2,047,085	2,047,085	4,544,191	403,040	
Wisconsin.....	8,547	6,015	109,164	144	2,176	2,364	941,315	35,717	2,367,032	4,440,980	352,640	
Iowa.....	9,700	6,944	144,400	.....	.....	3,410	310,405	.....	2,047,035	4,440,980	403,040	
Minnesota.....	7,024	5,470	118,492	.....	.....	2,104	150,000	.....	1,047,035	2,367,032	274,417	
Nebraska.....	4,044	3,470	118,492	.....	.....	2,104	150,000	.....	1,047,035	2,367,032	274,417	

California.....	2, 207	2, 135	145, 705	1, 441	62, 000	1, 077	3, 330	301, 000	1, 070, 024	1, 071, 525	3, 351, 153	421, 636
Oregon.....	11, 440	8, 242	304, 032	242	31, 000	1, 077	271, 064	2, 631, 016	2, 631, 243	34, 202	835, 310	191, 536
Washington Territory.....	2, 676	2, 434	70, 742	1, 088	62, 076	107	5, 330	306, 240	307, 840	1, 357, 335	4, 240, 132	697, 606
Idaho Territory.....	3, 344	1, 408	108, 678					307, 840	307, 840	66, 518	525, 760	101, 742
Montana Territory.....	1, 303	1, 303	109, 739					364, 174	364, 174		481, 580	176, 644
Dakota Territory.....	1, 400	1, 400	123, 672					518, 560	518, 560		302, 174	109, 739
Wyoming Territory.....	1, 456	1, 395	30, 449			61	4, 611	244, 115	244, 115	38, 364	518, 560	123, 672
Utah Territory.....	143	183	11, 905					41, 490	41, 490		322, 479	35, 060
Colorado Territory.....	3, 085	2, 968	369, 017			117	6, 945	1, 460, 298	1, 460, 298	81, 541	1, 541, 839	11, 905
New Mexico Territory.....	2, 617	2, 371	183, 905			246	15, 465	745, 819	745, 819	174, 645	960, 464	375, 962
Arizona Territory.....	2, 052	2, 052	329, 817					717, 308	717, 308		717, 308	198, 370
Total.....	2, 030	2, 030	109, 477					309, 088	309, 088		309, 088	329, 817
Estimated increase of cost by re-adjustment of pay on railroad routes from which returns were not received up to June 30, 1874, under act of March 3, 1873.....	269, 097	182, 994	5, 973, 390	14, 369	839, 004	67, 734	8, 589, 663	52, 088, 206	52, 088, 206	4, 078, 725	72, 460, 545	15, 402, 037
Railway post-office clerks.....												
Route-agents.....												523, 527
Mail-route messengers.....												1, 058, 200
Local agents.....												896, 640
Mail-messengers.....												136, 540
Aggregate.....							9, 113, 190					94, 710
												565, 773
												18, 707, 486

JOHN L. ROUETT,  
Second Assistant Postmaster-General.

## B.—Railroad service as in operation on the 30th of June, 1874.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance. Miles.	Total distance in each State.	Number of trips per week.	Annual pay. Dollars.	Annual pay in each State. Dollars.	Annual cost per mile on each route.	Remarks.
<b>MAINE.</b>									
1	Augusta to Skowhegan .....	Maine Central .....	22	.....	18	4,613 00	.....	140 00	
2	Portland to Bangor .....	do .....	17	.....	6	85,198 00	.....	190 00	
3	Newport to Dexter .....	do .....	73.98	.....	6	840 00	.....	175 00	
		do .....	35	.....	6		.....	225 00	
		do .....	14	.....	12		.....	50 00	\$140
4	Calais to Princeton .....	Saint Croix and Penobscot .....	21	.....	6	2,100 00	.....	50 00	or
		do .....	64	.....	6	14,500 00	.....	210 00	or
5	Portland to Augusta .....	Maine Central .....	9	.....	6	92,770 00	.....	136 00	\$
	Branch to Bath .....	Grand Trunk .....	92	.....	12	3,800 00	.....	65 00	\$450 per annum included for mail-messenger service.
6	Portland to Canada Line .....	Portland and Rochester .....	73	.....	6	1,246 57	.....	45 37	Old rate of pay.
7	Portland to Rochester, N. H. ....	Portland and Oxford Central .....	50	.....	12	20,693 75	.....	175 00	
8	Mechanic's Falls to Canton .....	Consolidated European and North American .....	27.5	.....	6	2,845 50	.....	55 00	
9	Bangor to Vanceborough .....	do .....	112.25	.....	6	2,846 50	.....	54 07	
10	Old Town to Guilford .....	Maine Central .....	42.1	.....	12	4,371 31	.....	60 00	
11	Belfast to Burnham Village .....	Portland and Ogdensburg .....	34.19	.....	12	6,000 00	.....	100 00	\$1,000 per annum included for freight.
12	Portland to Bartlett, N. H. ....	Knox and Lincoln .....	72.855	.....	6	150 00	.....	50 00	Old rate of pay.
13	Bath to Rockland .....	Maine Central .....	50	.....	6	5,412 50	.....	75 00	\$50 per annum included for mail-messenger service at Libanon.
14	Houlton to New Brunswick line ..	New Brunswick and Canada .....	3	.....	6	14,716 00	.....	983 00	
34	Farmington to Brunswick .....	do .....	71.5	.....	6	4,630 60	.....	110 00	
124	Portland to Portsmouth, N. H. ....	Eastern .....	53	.....	18	665 50	.....	50 00	Pay estimated.
221	Baldwin Falls, N. H., to Portland, Me. ....	Boston and Maine .....	44.18	.....	12		.....		
231	West Waterville to Norridgewock ..	Monmouth .....	13.31	1,037 165	6		130,466 12		
<b>NEW HAMPSHIRE.</b>									
224	Concord to Nashua .....	Concord .....	26	.....	12	14,100 00	.....	295 00	\$ 01.410 per annum included for mail-messenger service.
225	Concord to Nashua, via Lowell ..	Concord, Lowell, and Montreal ..	63	.....	12	175 00	.....	145 00	

254	Branch to Bristol Concord to Claremont Junction	Northern New Hampshire Concord and Claremont	69 13 54.90			12 6 12	14,110 00 6,998 80		190 00 50 00 120 00	\$1,150 per annum included for mail-messenger service. \$400 per annum included for mail-messenger service.
255	Concord to Portsmouth	Concord	60			12	3,600 00		60 00	
256	Manchester to North Weymouth	do	20.5			6	1,025 00		50 00	
257	Nashua to Greenfield	Boston and Lowell and Nashua and Lowell	27			12	1,755 00		65 00	
258	Contoocook Village to Hillsborough Bridge	Contoocook River	15			6	750 00		50 00	
259	Dover to Alton Bay	Boston and Maine	28			6	1,400 00		50 00	
260	Brock's Crossing to North Conway	Portsmouth, Great Falls, and Conway	6 64.11			12 6	4,256 60		60 00	
261	Groveton to Wells River, Vt	Boston, Concord and Montreal	10 22			12 6	4,860 00		90 00	
262	Hooksett to Pittsfield	Suncook Valley	22 20			12	1,000 00		50 00	12 times a week 8 months, 9 times a week 4 months.
351	Wolborough Junction to Wolfborough	Eastern	12.11			6	363 30		30 00	
352	Nashua to Acton, Mass	Nashua, Acton and Boston	23.44			6	1,172 00		50 00	Pay estimated.
359	Wing Road to Twin Mountain	Boston, Concord and Montreal	9.49			6	474 50		50 00	Do.
360	Portsmouth to Dover	Eastern	11.64			6	582 00		50 00	Do.
			618.28				64,407 20			
401	Burlington to Rouse's Point, N. Y.	Central Vermont	24.5			15	9,802 50		185 00	\$1,435.87 per annum included for railway post-office car.
402	White River Junction to Derby Line	Connecticut and Passumpsic Rivers and Massachusetts Valley	31 114.87			6	21,538 11		170 00 175 00	
403	Windsor to Burlington	Central Vermont	93			15	22,577 00		193 00	
405	Bellows Falls to Windsor	do	26			15	5,125 00		178 00	
406	Bellows Falls to Burlington	do	25			12	20,449 00		205 00	
407	Brattleborough to Bellows Falls	do	52 67.5			6	4,920 00		157 00	
408	Saint Albans to Canada line	do	24			18	1,445 00		182 00	
409	Saint Albans to Richford	do	17			12	2,149 50		205 00	
410	West Concord to Hyde Park	Portland and Ogdensburg	22.66			6	7,368 25		65 00	
522	Richford to Newport	Central Vermont	58.93			6	3,138 00		75 00	
525	Leicester Junction to Ticonderoga Station	do	31.38			6	1,450 00		125 00	
528	Wells River to Montpelier	Montpelier and Wells River	14.5 32.62			6	1,931 00		100 00	Pay estimated.
			647 96				100,455 49		50 00	
601	Boston to Portsmouth, N. H.	Eastern	58.5			24	16,667 50		295 00	
602	Boston to South Berwick Junction, Me. Branch to Great Falls, N. H.	Boston and Maine	75 3			11 12	13,050 00		172 00 50 00	

## REPORT OF THE POSTMASTER-GENERAL.

B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	MASSACHUSETTS—Continued.			Miles.		Dollars.	Dollars.	Dollars.	
603	Boston to Nashua, N. H.	Boston and Lowell and Nashua and Lowell.	42	.....	18	2,610 00	.....	205 00	
604	Boston to Fitchburgh	.....	52	.....	18	11,440 00	.....	220 00	
605	Boston to Albany, N. Y.	.....	101	.....	26	109,123 00	.....	680 00	
606	Boston to Woonsocket Falls, R. I.	Boston, Hartford and Erie	102	.....	13	2,640 80	.....	396 50	
607	Boston to Southbridge	.....do	39.68	.....	15	7,560 00	.....	60 00	\$260 per annum included for mail-messenger service.
608	Boston to Providence, R. I.	Boston and Providence	70	.....	12	4,400 00	.....	108 00	
609	Boston to Plymouth	Old Colony	23	.....	24	6,595 00	.....	100 00	
610	Boston to Medford	Boston and Maine	21	.....	12	275 00	.....	150 00	
615	Boston to West Lynn Depot	Eastern	11.28	.....	12	500 00	.....	50 00	
616	Boston to Dedham	Boston and Providence	26.72	.....	12	550 00	.....	50 00	
617	Grafton Depot to Millbury	Boston and Albany	4	.....	12	200 00	.....	50 00	
618	Salem to Gloucester	Eastern	16	.....	12	1,072 00	.....	67 00	
619	Salem to Marblehead	.....do	4	.....	12	200 00	.....	50 00	
620	Salem to Lawrence	.....do	20	.....	6	800 00	.....	40 00	
621	Georgetown to Haverhill	Boston and Maine	6.5	.....	12	325 00	.....	50 00	
622	Lawrence to Manchester, N. H.	Manchester and Lawrence	28	.....	18	4,564 00	.....	163 00	
623	Lowell to Lawrence	Boston and Lowell and Nashua and Lowell.	14	.....	21	1,050 00	.....	50 00	\$350 per annum included for mail-messenger service.
624	Winchester to Woburn	.....do	3	.....	12	150 00	.....	50 00	
625	Porter's Station to Concord	.....do	15.96	.....	12	792 00	.....	50 00	
626	South Acton Depot to Hudson	Fitchburgh	9	.....	12	500 00	.....	50 00	\$50 per annum included for mail-messenger service.
627	Ayer to Lowell	Boston and Lowell and Nashua and Lowell.	17	.....	15	850 00	.....	50 00	
628	Ayer to Greenville	Fitchburgh	23	.....	12	1,437 50	.....	62 50	
629	Auburndale Station to Newton Lower Falls.	Boston and Albany	2	.....	6	100 00	.....	50 00	
630	Natick to Saxtonville	.....do	4	.....	12	900 00	.....	50 00	
631	North Framingham to Pratt's Junction.	Boston, Clinton and Fitchburgh	20	.....	12	2,610 00	.....	60 00	
632	South Framingham to Milford	Boston and Albany	13	.....	24	1,020 00	.....	60 00	\$200 per annum included for mail-messenger service.



[illegible]

## REPORT OF THE POSTMASTER-GENERAL.

B.—Railroad service as in operation on the 30th of June, 1874.—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance. Miles.	Total distance in each State. Miles.	Number of trips per week.	Annual pay. Dollars.	Annual pay in each State. Dollars.	Annual cost per mile on each route.	Remarks.
<b>MASSACHUSETTS—Continued.</b>									
737	Cohasset Narrows to Wood's Hole	Old Colony	17.67	.....	6	1,311 51	.....	Dollars. 53 00	\$375 per annum included for mail-messenger service. Pay estimated.
741	Wenham to Essex	Eastern	5.55	.....	6	277 50	.....	50 00	Do.
742	.....	do	6.05	.....	6	302 50	.....	50 00	Do.
743	.....	do	8.54	.....	6	437 00	.....	50 00	Do.
744	.....	Central Vermont	21	.....	18	3,937 50	.....	167 50	Do.
				1,822.425		306,878 49			
<b>RHODE ISLAND.</b>									
801	Providence to Worcester, Mass	Providence and Worcester	44	.....	18	6,340 00	.....	110 00	\$1,500 per annum included for mail-messenger service.
802	Providence to New London, Conn	Stonington and Providence	63.75	.....	224	9,243 75	.....	145 00	
803	Providence to Bristol	Providence, Warren and Bristol	14.6	.....	12	1,928 00	.....	60 00	\$1,050 per annum included for mail-messenger service.
804	Warren to Fall River	Fall River, Warren and Providence	7	.....	12	420 00	.....	60 00	Pay estimated.
805	Providence to Pascoag	Providence and Springfield	23.12	.....	6	1,156 00	.....	50 00	
				152.47		19,065 75			
<b>CONNECTICUT.</b>									
901	Norwich to Worcester, Mass	Boston, Hartford and Erie	60	.....	12	5,100 00	.....	85 00	
902	New London to Palmer, Mass	Central Vermont	30	.....	23	7,800 00	.....	120 00	
903	Middletown to Berlin Depot	New York, New Haven and Hartford	35	.....	18	1,000 00	.....	100 00	Old rate of pay.
904	New Haven to New London	do	50	.....	23	7,507 00	.....	150 00	Old rate of pay. \$67 per annum included for mail-messenger service.
905	New Haven to Springfield, Mass	do	63.833	.....	31	20,745 63	.....	325 00	Old rate of pay.
906	New Haven to Williamburgh, Mass	do	85.49	.....	12	.....	.....	100 00	
907	New Haven to New Hartford, Conn	New Haven and Northampton	15.56	.....	10	14,504 80	.....	50 00	
908	New Haven to New York, N Y	New York, New Haven and Hartford	70.333	.....	31	28,025 00	.....	375 00	
909	New York to Watertown	Naugatuck	68	.....	12	6,167 50	.....	95 00	\$150 per annum included for mail-messenger service.
			5.75	.....	12	.....	.....	70 00	Do.

Line No.	Route	Days	1st Class	2nd Class	3rd Class	Mail	Express	Notes
908	Bridgeport to Pittsfield, Mass.	110	11	5	5			
909	Branch to State Line	11	5	5	5			
910	Branch to Brookfield Junction	84	5	5	5			
911	South Norwalk to Danbury	12	4	4	4			
912	Branch to Ridgefield	12	4	4	4			
913	Branch to Hawleyville	12	4	4	4			
914	Waterbury to Providence, R. I.	12	4	4	4			
915	Vernon Depot to Rockville	12	4	4	4			
916	Branch to Vernon	12	4	4	4			
917	New Haven to Willimantic	12	4	4	4			
918	Hartford to New Saybrook	12	4	4	4			
919	New Haven to Ansonia	12	4	4	4			
920	Hartford to Millerton, N. Y.	12	4	4	4			
921	Litchfield to Hawleyville	12	4	4	4			
922	East Thompson to Willimantic	12	4	4	4			
923	New York to Dunkirk	12	4	4	4			
924	Suffern to Piermont	12	4	4	4			
925	Buffalo to Suspension Bridge	12	4	4	4			
926	Newburgh to Chester	12	4	4	4			
927	Branch, Vail's Gate to junction	12	4	4	4			
928	with main stem	12	4	4	4			
929	Rochester to Avon	12	4	4	4			
930	Avon to Danville	12	4	4	4			
931	Attica to Corning	12	4	4	4			
932	Buffalo to Hornellville	12	4	4	4			
933	Goshen to Montgomery	12	4	4	4			
934	Goshen to Pine Island	12	4	4	4			
935	New York to Troy	12	4	4	4			
936	Troy to Schenectady	12	4	4	4			
937	Syracuse to Rochester	12	4	4	4			
938	Canandaigua to Niagara Falls	12	4	4	4			
939	Buffalo to Lockport	12	4	4	4			
940	do	12	4	4	4			
941	do	12	4	4	4			
942	do	12	4	4	4			
943	do	12	4	4	4			
944	New York and Harlem	12	4	4	4			
945	Rouseleur and Saratoga	12	4	4	4			
946	do	12	4	4	4			
947	do	12	4	4	4			
948	do	12	4	4	4			
949	Rome, Watertown and Ogdensburg	12	4	4	4			
950	do	12	4	4	4			
951	do	12	4	4	4			
952	do	12	4	4	4			
953	do	12	4	4	4			
954	do	12	4	4	4			
955	do	12	4	4	4			
956	do	12	4	4	4			

## REPORT OF THE POSTMASTER-GENERAL.

B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and terminal.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	NEW YORK—Continued.			Miles.		Dollars.	Dollars.	Dollars.	
1227	{ Rome to Ogdensburg .....	Rome, Watertown and Ogdensburg.	{ 72.62	.....	18	21,158 50	.....	138 00	\$2,000 per annum included for mail-messenger service in New York.
	{ Branch, De Kalb Junction to Potsdam Junction. ....			.....	12		.....	138 00	
1228	{ Chenango Forks to Norwich .....			.....	6		.....	62 50	
				.....	12	1,841 40	.....	60 00	
1229	Utica to Norwich.....	do.....	54.5	.....	12	4,360 00	.....	80 00	
1230	Oswego to Ithaca.....	do.....	35	.....	12	2,800 00	.....	80 00	
1231	Cassville Junction to Richfield Springs.	do.....	21	.....	12	1,155 00	.....	55 00	
1832	Mineola to Locust Valley.....	Long Island .....	12 25	.....	12	612 50	.....	50 00	
1233	{ New York to Greenport .....	do.....	{ 32	.....	12		.....		
	{ Branch, Mineola to Hempstead. }	do.....		.....	9	11,045 00	.....	90 00	
		do.....		.....	6		.....		
		do.....		.....	12		.....		
1234	Hicksville to Northport.....	do.....	16.5	.....	12	825 00	.....	50 00	
1235	{ Oswego to Middletown.....	New York and Oswego Midland.....	{ 249.98	.....	12	12,899 00	.....	50 00	Old rate of pay.
	{ Branch, Summittville Junction to Ellenville. ....	do.....		.....	6		.....		
1236	Sidney Plains to New Berlin.....	do.....		.....	6	1,242 00	.....	50 00	
1238	Norwich to Cortland Village.....	do.....		.....	6	2,460 50	.....	50 00	
1239	Clinton to Rome.....	do.....	13.75	.....	12	687 50	.....	50 00	Do.
1240	Walton to Delhi .....	do.....	16	.....	12	800 00	.....	50 00	Do.
1241	Buffalo to Chicago, Ill.....	Lake Shore and Michigan Southern.	{ 169	.....	26	283,853 50	.....	540 00	Old rate of pay; \$120 per annum included for side service.
		do.....		.....	26		.....	540 00	
		do.....		.....	36		.....	565 00	
		do.....		.....	12		.....	445 00	
1242	Rouse's Point to Ogdensburg .....	Central Vermont.....	119	.....	9	14,875 00	.....	125 00	Old rate of pay; \$120 per annum included for side service.
1243	Plattsburgh to Canada line .....	New York and Canada .....	23	.....	12	1,150 00	.....	50 00	
1244	Cobleskill to Cherry Valley.....	Delaware and Hudson Canal.....	22 47	.....	12	1,143 50	.....	50 00	
1245	Albany to Binghamton.....	do.....	142	.....	18	14,900 00	.....	100 00	
1246	Schoharie to Middleburgh .....	Middleburgh and Schoharie.....	5.5	.....	12	395 00	.....	50 00	
		do.....		.....			.....		
1247	Central Bridge to Schoharie .....	Schoharie Valley .....	5	.....	18	400 00	.....	80 00	Old rate of pay.
1248	Utica to Smith's Valley Station .....	New York and Oswego Midland .....	31.4	.....	6	1,570 00	.....	50 00	



## REPORT OF THE POSTMASTER-GENERAL.

## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
1282	NEW YORK—Continued.	South Side .....	Miles. 55	Miles. .....	12	Dollars. 3,400 00	Dollars. .....	Dollars. 50 00	\$550 per annum included for side service; also \$100 per annum for supply of Bell-port and Fireplace.
1283	Utica to Watertown .....	Utica and Black River .....	92.22	.....	12	5,994 30	.....	65 00	Pay estimated.
1284	Cayuga to Ithaca .....	Cayuga Lake .....	38.05	.....	6	1,902 50	.....	50 00	
1285	Sodus Point to Gorham Station .....	Sodus Point and Southern .....	34	.....	6	1,700 00	.....	50 00	
1286	Horseheads to Van Ettenville .....	Utica, Ithaca and Elmira .....	19.89	.....	6	994 30	.....	50 00	Old rate of pay. Pay estimated. Do.
1287	Oswego to Ontario .....	Lake Ontario Shore .....	51.81	.....	6	2,590 50	.....	50 00	
1288	Carthage to Clayton .....	Utica and Black River .....	18	.....	12	1,837 50	.....	50 00	
1289	Freeville to Scipio .....	Utica, Ithaca and Elmira .....	18.75	.....	6	1,441 00	.....	50 00	Old rate of pay. Pay estimated. Do.
1290	Buffalo to Gowanda .....	Buffalo and Jamestown .....	28.82	.....	6	1,712 50	.....	50 00	
1291	Golden's Bridge to Mahopac .....	New York and Harlem .....	7.5	.....	6	375 00	.....	50 00	
1292	Crawford Junction to Pine Bush .....	New York and Oswego Midland .....	10.18	.....	6	509 00	.....	50 00	Old rate of pay. Pay estimated. Do.
1293	Ithaca to Geneva .....	Geneva and Ithaca .....	40.25	.....	6	2,012 50	.....	50 00	
				5,651.26			1,159,514 25		
2101	NEW JERSEY.	Central Railroad Company of New Jersey.	74	.....	19	92,200 00	.....	300 00	Old rate of pay. Do.
2102	Somerville to Flemington .....	.....do .....	16.06	.....	6	690 00	.....	43 00	
2103	New York to New Brunswick .....	Pennsylvania .....	36	.....	654	20,412 00	.....	567 00	
2104	New Brunswick to Philadelphia, Pa. ....	.....do .....	54	.....	844	30,132 00	.....	553 00	Old rate of pay. Do.
2105	{ Philadelphia, Pa., to South Am- boy, N.J. Branch, Bordentown to Trenton }	.....do .....	66	.....	84	4,260 00	.....	60 00	
2106	New York to Easton, Pa. ....	Morris and Essex .....	6	.....	84	7,520 00	.....	50 00	
2107	Camden to Atlantic City .....	Camden and Atlantic .....	24.47	.....	12	3,000 00	.....	100 00	Old rate of pay. Do.
2108	New York to Nyack .....	Northern Railroad Company of New Jersey.	30	.....	6	2,158 00	.....	50 00	
2109	{ Philadelphia, Pa., to Hightstown, N.J. Branch, Hurlington to Mt Holly }	Pennsylvania .....	{ 25 27.50 7 }	.....	{ 12 6 6 }	3,725 00	.....	{ 75 00 40 00 50 00 }	



## REPORT OF THE POSTMASTER-GENERAL.

Station	Line	Distance	Rate	Per Annum	Notes
Philadelphia, Pa., to Bridgeton, N. J.	West Jersey	18	4,924 00	110 00	\$600 per annum included for mail-messenger service in Philadelphia.
Glassborough to Millville	do	19	2,500 00	100 00	
Millville to Cape May	do	19	2,075 00	75 00	
Blumer to Salem	do	12	1,040 00	60 24	
Monett Holly to Medford	Pennsylvania	12	305 00	50 00	
Jamesburgh to Squam Village	Frederick, Jamesburgh and Agricultural	12	1,352 14	66 37	\$100 per annum included for side service at Englestown.
Trenton to Belvidere	Pennsylvania	204	5,496 00	80 00	
Lambertville to Flemington	do	12	606 50	50 80	
Greensborough Station to Pennsylvania	do	12	280 00	50 00	
New York to New Bridge	Erle	16.5	825 00	50 00	
New Bridge to Nanuet Junction	do	13.25	652 50	50 00	
Waterloo to Franklin Furnace	do	12	1,650 00	50 00	\$100 per annum included for side service on branch.
Branch, La Fayette Junction to Branchville	do	6	1,796 50	50 00	Old rate of pay.
New York to Danville	do	12	500 00	50 00	
Dover to Chester	do	12	275 00	48 00	
Newark to Mont Clair	do	6	408 00	50 00	
Rocky Hill to Monmouth Junction	Pennsylvania	12	75 00	75 00	
Sandy Hook to Pemberton Junction	do	6	50 00	50 00	
Branch, Eatontown to Port Monmouth	do	12	6,387 50	50 00	
Branch, Manchester to Barnegat Junction	do	12	50 00	50 00	
Whiting to Ates	do	6	1,085 00	50 00	
Newark to Paterson	do	6	650 00	50 00	
Ateson to Greenwich	do	6	1,770 00	40 00	Old rate of pay.
Whiting to Long Beach	do	6	1,584 25	50 00	\$100.45 additional for three months' service on 84 miles.
Kinkora to New Lisbon	Pennsylvania	6	576 40	40 00	\$650 per annum included for side service.
Bridgeton to Port Norris	do	6	1,257 30	38 00	
Egg Harbor City to May's Landing	Camden and Atlantic	12	371 50	58 00	Old rate of pay.
Jersey City to Kingwood Furnace	New York and Oswego Midland	6	1,795 00	50 00	Pay estimated.
Ates to Williamstown	do	6	270 00	30 00	Old rate of pay.
Summit to Bernardsville	do	6	730 00	50 00	
Woodbury to Swedesborough	do	6	550 00	50 00	
New York to Middletown	do	6	7,304 00	83 00	
			144,821 40		
Philadelphia to Pittsburgh	Pennsylvania	353.6	154,876 80	438 00	
Philadelphia to Pottsville	Philadelphia and Reading	92.5	11,568 50	125 00	
Philadelphia to West Chester	West Chester and Philadelphia	90.13	2,068 50	75 00	\$102.15 per annum included for side service.

## REPORT OF THE POSTMASTER-GENERAL.

B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route	State and terminal.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
			Miles.	Miles.		Dollars.	Dollars.	Dollars.	
PENNSYLVANIA—Continued.									
2404	Philadelphia to Bethlehem	North Pennsylvania	54.6	54.6	454	6,406 00		110 00	
2405	Branch, Lansdale to Doylestown		8.8	8.8	18			50 00	
2406	Philadelphia to Norristown	Philadelphia and Reading	16.24	16.24	18	691 55		55 00	
2407	Philadelphia to Darby	Philadelphia and Darby	5	5	6	500 00		100 00	
2408	Bridgeport to Downingtown	Philadelphia and Reading	31.48	31.48	6	644 40		30 00	
2409	Chester to Port Deposit, Md.	Philadelphia and Baltimore Central	53.35	53.35	12	3,555 00		60 00	
2410	Honesdale to Lackawanna	Erie	25	25	12	1,500 00		60 00	
2411	Allentown to Waverly	Lehigh Valley	55	55	10	30,800 00		115 00	
2412	Penn Haven Junction to Mount Carmel	do	105.5	105.5	10	2,500 00		105 00	
2413	Penn Haven Junction to Audenried	do	50	50	94			50 00	
2414	Pottsville to Herndon	Philadelphia and Reading	17.05	17.05	12	1,312 50		75 00	
2415	Port Clinton to Williamsport	do	81.1	81.1	108	4,480 50		55 00	
2416	Seneca to Tomhocken	Pennsylvania	121.53	121.53	7	7,291 60		60 00	
2417	Hasle Creek Bridge to Tomhocken	Lehigh Valley	44.1	44.1	6	2,381 40		54 00	
2418	Scranton to Northumberland	do	13.8	13.8	13	2,098 00		85 00	
2419	Scranton to Carbondale	Lackawanna and Bloomsburg	11.4	11.4	13	7,900 00		75 00	
2420	Binghamton, N. Y., to New Hampton, N. J.	do	60	60	7.5	1,900 00		80 00	
2421	Branch to Morris Run	do	17.11	17.11	12			50 00	\$244.50 per annum included in full messenger service.
2422	Branch to Arnot	do	144.5	144.5	94	12,982 50		85 00	
2423	Williamsport to Elmira	do	30.88	30.88	12			75 00	
2424	Seneca to Erie	Tioga	6.85	6.85	12	3,715 80		50 00	
2425	Seneca to Mount Carmel	do	3.8	3.8	6			50 00	
2426	Alton to Carleton	do	3.79	3.79	6			50 00	
2427	Irving to Cherry	Northern Central	76	76	12	13,850 00		175 00	
2428	Marionburg to Leesman Place	Pennsylvania	30.8	30.8	18	36,010 20		195 00	
2429	Marionburg to Middlestown	do	247.8	247.8	18			114 00	
2430	Marionburg to Middlestown	do	23.5	23.5	10	1,400 00		50 00	
2431	Marionburg to Middlestown	do	23.5	23.5	6	1,020 00		40 00	
2432	Marionburg to Middlestown	do	23.5	23.5	6	6,305 00		67 00	
2433	Marionburg to Middlestown	do	4.35	4.35	6	250 00		54 42	
2434	Marionburg to Middlestown	do	21.8	21.8	12	2,144 00		70 00	
2435	Marionburg to Middlestown	do	21.8	21.8	78	2,015 00		80 00	
2436	Marionburg to Middlestown	do	16	16	6	2,760 00		50 00	

Station	Distance	Rate	Notes
Harrisburgh to Martinsburg, W. V.	14.5	7,380 00	
Cumberland Valley	44 75		
Reading and Columbia	30.75		
Reading and Columbia	20.7	2,375 00	
Pennsylvania	7.8		
Hanover Branch	13.5	675 00	
Hanover Junction to Frederick, Md.	50.4	2,580 00	
Hanover to Gettysburgh	17.5	1,050 00	
Susquehanna, Gettysburgh and Potomac	44	3,000 00	
Huntingdon and Broad Top	6		
Pennsylvania	40.8	2,830 00	
do	92.3		
do	3	1,000 00	
do	6.7		
do	11	550 00	
do	55.1	1,805 75	
do	12.7		
do	61.7	4,140 50	
Hempfield	39	1,977 00	
Pittsburgh to Oil City	132.71	12,571 00	
Brauch, Junction to Indiana	19	1,140 00	
Meads Hill to Oil City	30.25	2,905 62	
Miles Grove to Newcastle	63	6,640 00	
Oil City to Ashland, Ohio	67.09	4,354 50	
Bethlehem	15	750 00	
Downing	16	940 00	
West Ch	9	250 00	
Lewistown Junction to Mifflin	12.5	625 00	
Pottsville to Frackville	8.51	425 50	
Greenville to Harrisville	33.5	2,010 00	
Carlisle to Mountain Creek	12	450 00	
Fryebout to Butler	21.3	1,065 00	
Wilmington, Del., to Birdsboro, Pa.	61.6	3,140 00	
Pittsburgh to Washington	92.8	1,422 00	
Terkmen Junction to Green Lane	17.92	805 40	
Pottstown to Colbrookdale	13.05	582 00	
Oleopolis to Pit-Hole City	7	310 00	
Lebanon to Tower City	43.1	1,784 00	
Towards to Bernice	22.29	1,172 50	
Schmalkill to Glen Carbon	15.2	568 00	
Topcon to Kutztown	4.36	218 00	

B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
			Miles.	Miles.		Dollars.	Dollars.	Dollars.	
	PENNSYLVANIA—Continued.								
2464	{ Pittsburgh to Cumberland, Md. Branch, Broad Top to Mount Pleasant. Branch, Connellsville to Uniontown. Carbondale to Susquehanna. Lawrenceville to Antrim. Phoenixville to Eagle. Lewisburgh to Mifflinburg. Lewistown Junction to Sunbury. Union City to Titusville. Towanda to Barclay. Shaft's Bridge to Somerset.	Pittsburgh and Connellsville	{ 147.8 9 12	..... ..... .....	{ 12 12 12	13,661 00	..... ..... .....	{ 85 00 50 00 54 00	Old rate of pay.
2465									
2466									
2467									
2468									
2469									
2470									
2471									
2472									
2474	{ Marion Junction to Richmond Furnace. Branch, Mercersburgh Junction to Mercersburgh. Mount Dallas Station to Cumberland, Md. Allentown to Harrisburgh. Conshohocken to Flourtown.	Cumberland Valley	{ 19.13 2.31	..... .....	{ 6 6	1,072 00	..... .....	50 00	\$200 per annum included for mail-messenger service.
2475									
2476									
2477									
2479	Easton to Allentown. Lawrenceville to Elkland.	Lehigh Valley	{ 16.58 13.8	..... .....	{ 36 12	4,078 68 690 10	..... .....	{ 246 00 50 00	\$145 per annum included for mail-messenger service.
2484									
				3,871.91			439,524 90		
3401	DELAWARE.								
	Wilmington to Delmar.	Philadelphia, Wilmington and Baltimore.	60.92	.....	12	11,145 80	.....	115 00	
3402	Delmar to Crisfield.	Eastern Shore.	39	.....	6	2,470 00	.....	65 00	
3403	Crityton to Easton, Md.	Maryland and Delaware.	44	.....	6	2,310 00	.....	53 50	
3404	Harrisburg to Lawrence.	Junction and Breakwater.	40	.....	6	2,000 00	.....	50 00	
3405	Wilmington to Landenberg.	Wilmington and Western.	19.53	.....	6	741 20	.....	40 00	
				274 45			14,707 00		

MARYLAND.		WEST VIRGINIA.		VIRGINIA.		OLD RATE OF PAY.		NEW RATE OF PAY.	
No.	Route	No.	Route	No.	Route	No.	Route	No.	Route
3501	Baltimore to Philadelphia, Pa.	4101	Harper's Ferry to Harrisonburg, Va.	4401	Game Point to Richmond	3501	Philadelphia, Wilmington and Baltimore	4401	Richmond, Fredericksburg and Potomac
3502	Baltimore to Sanbury, Pa.	4102	Grafton to Parkersburg	4402	Alexandria to Lynchburg	3502	Northern Central	4402	Orange, Alexandria and Manassas
3503	Baltimore to Washington, D. C.	4120	Laurel Junction to Volcano	4403	Branch to Warrenton	3503	Baltimore and Ohio	4403	Washington and Ohio
3504	Washington, D. C., to Wheeling, W. Va.	4203	Huntington to Hinton	4404	Alexandria to Hamilton	3504	do	4404	do
3505	Araby to Frederick			4405	Manassas to Strasburg	3505	do	4405	do
3506	Weverton to Hagerstown			4406	Richmond to Hinton, W. Va.	3506	Western Maryland	4406	do
3507	Baltimore to Williamsport			4407	Richmond to Greensboro, N. C.	3507	do	4407	do
3508	Annapolis to Annapolis Junction			4408	Richmond to West Point	3508	Annapolis and Elk Ridge	4408	do
3509	Camburidge to Seaford, Del.			4409	Richmond to Petersburg	3509	Dorchester and Delaware	4409	do
3510	Mid					3510	Worcester and Somerset		
3511	Masses's Cross-Roads to Chester-town					3511	Worcester		
3512	Baltimore to Washington, D. C.					3512	Baltimore and Ohio		
3513	Howie to Pope's Creek					3513	do		
3514	Newtown Junction to Newtown					3514	do		
3515	Berlin to Snow Hill					3515	do		
3516	Salut Denis to Point of Rocks					3516	do		
3517						3517	do		
3518						3518	do		
4101						4101			
4102						4102			
4120						4120			
4203						4203			
4401						4401			
4402						4402			
4403						4403			
4404						4404			
4405						4405			
4406						4406			
4407						4407			
4408						4408			
4409						4409			
4410						4410			
4411						4411			

## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and terminal.	Corporate title of company carrying the mail.	Distance. Miles.	Total distance in each State. Miles.	Number of trips per week.	Annual pay. Dollars.	Annual pay in each State. Dollars.	Annual cost per mile on each route.	Remarks.
<b>VIRGINIA—Continued.</b>									
4412	Petersburgh to Norfolk	Atlantic, Mississippi and Ohio	61.5	.....	6	4,800 00	.....	60 00	Old rate of pay.
4413	Petersburgh to Lynchburgh	do	123	.....	6	7,085 00	.....	65 00	
4414	do	do	205	.....	14	49,200 00	.....	240 00	
4415	Seaboard and Roanoke	do	60	.....	6	6,000 00	.....	75 00	
4701	Atlantic, Mississippi and Ohio	Atlantic, Mississippi and Ohio	9.5	.....	6	285 00	.....	30 00	
				1,464.50		207,085 50			
<b>NORTH CAROLINA.</b>									
5001	Raleigh to Weldon	Raleigh and Gaston	27	.....	7	7,275 00	.....	75 00	
5002	Weldon to Wilmington	Wilmington and Weldon	102.25	.....	14	24,337 50	.....	150 00	
5003	Branch, Rocky Mount to Tarborough	do	17	.....	7	608 00	.....	35.765	
5004	Wilmington to Wadesborough	Wilmington, Charlotte and Rutherford	141	.....	7	7,050 00	.....	50 00	
5004	Goldensborough to Charlotte	Richmond and Danville	93	.....	18	9,468 00	.....	126 00	
5005	Goldensborough to Morehead City	Atlantic and North Carolina	130	.....	12	75 00	.....	75 00	
5006	Salisbury to Old Fort	Western North Carolina	95	.....	7	5,225 00	.....	55 00	
5007	Charlotte to Buffalo Paper Mills	Wilmington, Charlotte and Rutherford, Western Division	114	.....	6	5,700 00	.....	50 00	
5013	Charlotte to Statesville	do	32.5	.....	6	2,625 00	.....	50 00	
5016	Raleigh to Sanford	Atlantic, Tennessee and Ohio	48.51	.....	6	1,936 00	.....	40 00	
5016	Sanford to Fayetteville	Raleigh and Augusta Air-Line	45.78	.....	7	2,289 00	.....	50 00	
5016	Sanford to Egypt Depot	Western	36.15	.....	7	1,907 50	.....	50 00	
5020	Greensborough to Salem	do	7	.....	2	147 00	.....	31 00	
		Northwestern North Carolina	20.31	.....	6	1,465 20	.....	50 00	
				1,670.5		92,033 50			
<b>SOUTH CAROLINA.</b>									
5001	Charlotte, N. C., to Augusta, Ga.	Charlotte, Columbia and Augusta	195	.....	12	94,375 00	.....	125 00	
5006	Columbia to Greenville C. H.	do	143.5	.....	6	75 00	.....	75 00	
5006	Branch, Hodges to Abbeville C. H.	Greenville and Columbia	11.5	.....	6	11,408 00	.....	30 00	
5004	Branch, Pelton to Anderson C. H.	Wilmington, Columbia and Augusta	9.75	.....	6	94,083 00	.....	30 00	
	Columbia to Wilmington, N. C.	do	100.70	.....	14		.....	100 00	
					14			120 00	



5003	Branch, Kingsville to Camden	37.5	12,055.00	70.00
5004	Branch, Kingsville to Columbia	27		50.00
5005	Branch, Branchville to Charleston	62		70.00
5006	Charleston to Savannah, Ga.	104	13,000.00	195.00
5007	Charleston to Florence	104	12,000.00	125.00
5008	Florence to Cheraw	40	9,000.00	50.00
5009	Cheraw and Darlington	21.5	1,175.00	50.00
5010	Cheraw and Darlington	68.75	3,437.50	50.00
5011	Cheraw and Darlington	31.58	1,500.00	38.07
5012	Cheraw and Darlington	34	1,000.00	20.00
5013	Cheraw and Darlington	112.99	5,614.00	50.00
5014	Cheraw and Darlington	1,315.06	117,939.50	
GEORGIA.				
6001	August to Atlanta	171.866	21,458.33	125.00
6002	Atlanta to Chattanooga, Tenn.	138	17,250.00	125.00
6003	Atlanta to West Point	86.95	10,781.25	125.00
6004	Millen to Augusta	53.125	6,840.62	125.00
6005	Augusta to Wells	18.5	925.00	50.00
6006	Wells to Rome	41	3,315.00	75.00
6007	Rome to Atlanta	20.5	1,025.00	50.00
6008	Atlanta and Gulf	180.75	23,350.00	100.00
6009	Central Railroad and Banking Co	105.5	21,133.75	50.00
6010	Southwestern	192.125	7,500.00	110.00
6011	Macon and Western	100	10,300.00	75.00
6012	Macon and Brunswick	103	9,900.00	100.00
6013	Central Railroad and Banking Co.	198	9,912.50	50.00
6014	do	18.25	1,106.00	50.00
6015	Southwestern	22.125	10,181.66	78.00
6016	Atlantic and Gulf	115.866	2,916.00	50.00
6017	Atlantic and Richmond Air-Line	22.5	18,553.00	70.00
6018	Southwestern	34	606.00	50.00
6019	Macon and Western	58.333	680.00	40.00
6020	Cherokee	906.5	3,950.00	30.00
6021	Macon and Augusta	13.38	1,830.00	50.00
6022	Savannah Griffin & North Alabama	17.25	5,137.50	30.00
6023	Brunswick and Albany	94	1,057.95	45.00
6024	North and South	79		
6025		61		
6026		171.25		
6027		93.51		
6028		2,323.19		
FLORIDA.				
6401	Fernandina to Cedar Keys	47.4	7,740.00	50.00
6402	Atlantic, Gulf and West India Transit Company.	107.4		50.00

## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and terminl.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
			Miles.	Miles.		Dollars.	Dollars.	Dollars.	
4412	Petersburgh to Norfolk .....	Atlantic, Mississippi and Ohio .....	81.5	.....	6	4,890 00	.....	60 00	
4413	Petersburgh to Lynchburgh .....	do .....	123	.....	6	7,995 00	.....	65 00	
4414	Lynchburgh to Bristol, Tenn .....	do .....	205	.....	14	49,200 00	.....	240 00	
4415	Portsmouth to Weldon, N. C .....	Seaboard and Roanoke .....	80	.....	6	6,000 00	.....	75 00	
4701	Glade Spring to Saltville .....	Atlantic, Mississippi and Ohio .....	9.5	.....	6	285 00	.....	30 00	
				1,464.59			207,095 50		Old rate of pay.
	NORTH CAROLINA.								
5001	Raleigh to Weldon .....	Raleigh and Gaston .....	97	.....	7	7,275 00	.....	75 00	
5002	Weldon to Wilmington .....	Wilmington and Weldon .....	162.25	.....	14	24,337 50	.....	150 00	
	Branch, Rocky Mount to Tarborough.		17	.....	7	608 00	.....	35.765	
5003	Wilmington to Wadesborough .....	Wilmington, Charlotte and Ruth-erford.	141	.....	7	7,050 00	.....	50 00	
5004	Goldsborough to Charlotte .....	Richmond and Danville .....	93	.....	12	2,468 00	.....	126 00	
5005	Goldsborough to Morehead City .....	Atlantic and North Carolina .....	130	.....	12	5,225 00	.....	75 00	
5006	Salisbury to Old Fort .....	Western North Carolina .....	95	.....	7	5,700 00	.....	55 00	
5007	Charlotte to Buffalo Paper Mills .....	Wilmington, Charlotte and Ruth-erford; Western Division.	114	.....	6	5,000 00	.....	50 00	
			52.5	.....	6	2,625 00	.....	50 00	
5213	Charlotte to Stateville .....	Atlantic, Tennessee and Ohio .....	48.51	.....	6	1,936 00	.....	40 00	
5216	Raleigh to Sanford .....	Raleigh and Augusta Air-Line .....	45.78	.....	7	2,289 00	.....	50 00	
5216	Sanford to Fayetteville .....	Western .....	38.15	.....	7	1,907 50	.....	50 00	
5216	Sanford to Egypt Depot .....	do .....	7	.....	2	147 00	.....	21 00	
5280	Greensborough to Salem .....	Northwestern North Carolina .....	29.31	.....	6	1,465 50	.....	50 00	
				1,670.5			82,033 50		
	SOUTH CAROLINA.								
5601	Charlotte, N. C., to Augusta, Ga .....	Charlotte, Columbia and Augusta .....	105	.....	13	24,375 00	.....	125 00	
	Columbia to Greenville C. H. .....		143.5	.....	6		.....	75 00	
5602	Branch, Hudson to Abbeville C. H. .....	Greenville and Columbia .....	11.5	.....	6	11,400 00	.....	30 00	
	Branch, Hilton to Anderson C. H. .....		9.75	.....	6		.....	30 00	
5604	Columbia to Wilmington, N. C .....	Wilmington, Columbia and Au-gusta.	42.04	.....	14	24,663 00	.....	100 00	
			109.70	.....	14		.....	150 00	



## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	FLORIDA—Continued.								
6402	{ Jacksonville to Chattahoochee River. Branch, Tallahassee to Saint Mark's.	Jacksonville, Pensacola and Mobile.	{ 131.25 65.5 21.75	.....	6	12,157 50	.....	{ 50 00 75 00 30 00	{ Old rate of pay.
6404	Pensacola to Whiting Junction, Ala.	Pensacola and Louisville.....	44	.....	7	2,200 00	.....	50 00	
6405	Tocoi to Saint Augustine.....	Saint John's.....	15.69	.....	6	784 50	.....	50 00	Do.
6406	Pensacola to Millview.....	Pensacola and Perdido.....	10.62	.....	6	318 75	.....	30 00	Do.
				443.61			23,170 75		
	ALABAMA.								
6601	Montgomery to West Point, Ga....	Western Railroad Company of Alabama.	88.5	.....	6	11,062 50	.....	125 00	
6602	Montgomery to Selma.....	.....do.....	50	.....	6	2,500 00	.....	50 00	
6603	Montgomery to Eufaula.....	Montgomery and Eufaula.....	81.24	.....	6	4,062 00	.....	50 00	
6604	Montgomery to Decatur.....	South and North Alabama.....	{ 63.6 119.05 271.5	.....	{ 7 7 13	{ 16,425 25 40,725 00	.....	{ 117 50 75 00 150 00	
6605	{ Memphis, Tenn., to Stevenson, Ala. Branch, Moscow, Tenn., to Somerville. Branch, Tusculumbia, to Florence.	Memphis and Charleston.....	{ 14.5 6.5	.....	6	435 00	.....	30 00	
6606	Marion Junction to Sawyerville....	Selma, Marion and Memphis.....	45.12	.....	6	2,256 00	.....	50 00	
6607	Opelika to Columbus, Ga.....	Western Railroad Company of Alabama.	28	.....	6	2,100 00	.....	75 00	
6608	Columbus, Ga., to Troy, Ala.....	Mobile and Girard.....	90	.....	6	4,500 00	.....	50 00	
6609	Selma to York Station.....	Alabama Central.....	81.7	.....	7	6,127 50	.....	75 00	Do.
6610	Selma to Dalton, Ga.....	Selma, Rome and Dalton.....	217.5	.....	6	23,750 00	.....	100 00	
6611	Gainesville to Gainesville Junction, Miss.	Mobile and Ohio.....	22	.....	6	1,100 00	.....	50 00	Do.
6612	Mobile to Montgomery.....	Mobile and Montgomery.....	170	.....	7	20,450 00	.....	150 00	
6613	Mobile to New Orleans, La.....	New Orleans, Mobile and Texas.....	140	.....	14	14,200 00	.....	150 00	

6614	Opelika to Buffalo	East Alabama and Cincinnati	22.5		6	675 00		30 00	Do.
6615	Chattanooga, Tenn., to Meridian, Miss.	Alabama and Chattanooga	200		7	15,370 00		53 00	
6616	Opelika to Salisbury	Savannah and Memphis	41.88		6	1,675 20		40 00	
6617	Selma to Pine Apple	Selma and Gulf	43.19		6	2,159 50		50 00	
6618	Mobile to Bigbee Bridge	Mobile and Alabama Grand Trunk	59.7		6	1,791 00		30 00	Do.
6619	Chohaw to Tuskegee	Tuskegee	6		6	300 00		50 00	
6620	Atalla to Gadsden	East Alabama and Cincinnati	6		6	300 00		50 00	Do.
6631	Eufaula to Clayton	Vicksburgh and Brunswick	22.5	2,010.18	6	1,125 00	183,813 95	50 00	
MISSISSIPPI.									
7001	Canton to Cairo, Ill	Southern Railroad Association	342.98		13	68,596 00		200 00	Do.
7002	Memphis, Tenn., to Grenada, Miss.	Mississippi and Tennessee	101.7		7	8,136 00		80 00	
7003	Vicksburgh to Meridian	Vicksburgh and Meridian	45.5		13	11,690 00		100 00	
7004	{ Mobile, Ala., to Columbus, Ky. } { Branch, Artesia to Columbus, } { Miss. }	Mobile and Ohio	472.7		7	59,927 50		75 00	Do.
7006	Grand Gulf to Port Gibson	Grand Gulf and Port Gibson	8		6	600 00		60 00	
7007	Muldon to Aberdeen	Mobile and Ohio	9		6	450 00		75 00	
7008	Middleton Station, Tenn., to Ripley, Miss.	Ripley	24.3	1,113.38	6	729 00	150,128 50	125 00	Do.
LOUISIANA.									
8001	New Orleans to Brashear	Morgan's Louisiana and Texas Railroad.	83		7	12,850 00		150 00	\$400 per annum included for side supply.
8002	New Orleans to Canton, Miss	New Orleans, Jackson and Great Northern.	206		13	41,200 00		200 00	
8003	Baton Rouge to Livonia	Baton Rouge, Grosse Tête and Opelousas.	28		3	360 00		12 86	
8004	Clinton to Port Hudson	Clinton and Port Hudson.	21		3	630 00		30 00	
8005	Vicksburgh, Miss., to Monroe, La.	North Louisiana and Texas	75.5		7	6,163 50		75 00	\$500 per annum included for ferriage and mail-messenger service.
8028	Saint Francisville to Woodville, Miss.	West Feliciana	27.57		3	964 95		35 00	
8090	New Orleans to Donaldsonville	New Orleans, Mobile and Texas	63.66		6	3,183 00		50 00	
8098	Terre Bonne to Houma	Morgan's Louisiana and Texas Railroad.	15.28	520.01	6	764 00	66,114 45	50 00	
TEXAS.									
8502	Houston to Galveston	Galveston, Houston and Henderson.	50		12	8,000 00		160 00	
8503	Houston to Dennison	Houston and Texas Central	337.55		6	34,035 00		100 83	
8504	{ Harrisburgh to Columbus } { Columbus to Schulenburg }	Galveston, Harrisburgh and San Antonio.	84		6	8,400 00		100 00	
8505	Hempstead to Austin	Houston and Texas Central	24		6	1,200 00		50 00	Pay estimated.
			112.7		6	11,870 00		100 00	

## REPORT OF THE POSTMASTER-GENERAL.

B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and terminal.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
			Miles.	Miles.		Dollars.	Dollars.	Dollars.	
8506	TEXAS—Continued.	Shreveport, La., to Dallas .....	189.2	.....	6	15,136 00	.....	80 00	Forty-six miles covered by route 8566. Pay estimated.
8577a		Bremoud to Waco .....	44.56	.....	6	2,896 40	.....	65 00	
8666		Rockdale to Longview .....	201.52	.....	6	10,076 00	.....	50 00	
8683		Houston to Mineola .....	249.5	.....	6	10,175 00	.....	50 00	
8684		Indianola to Cuero .....	67.2	.....	6	3,360 00	.....	50 00	
8749	ARKANSAS.	Marshall to Texarkana, Ark. ....	74	.....	6	3,700 00	.....	50 00	Pay estimated.
				1,440.23			108,848 40		
7501		Memphis, Tenn., to Argenta, Ark. ..	134	.....	7	13,400 00	.....	100 00	
7502a		Helena to Clarendon .....	48.2	.....	6	2,169 00	.....	45 00	
7525a		Chicot to Pine Bluff .....	72.78	.....	3	3,275 10	.....	45 00	
7645a		Chicot to Monticello .....	44.28	.....	6	1,771 20	.....	40 00	
				299.26			20,615 30		
10301	MISSOURI.	Saint Louis to Atchison, Kans. ....	225.5	.....	12	65,807 50	.....	215 00	Pay estimated. Do.
			44.25	.....	12		.....	100 00	
		{ Saint Louis to Columbus, Ky. ....	197	.....	13		.....	100 00	
		{ Branch, Mineral Point to Potosi	4	.....	6	40,860 00	.....	50 00	
		{ Branch, Bismarck to Argenta, Ark.	262	.....	6		.....	80 00	
10502		Branch, Argenta, Ark., to Fulton	125	.....	6	6,250 00	.....	50 00	
		Branch, Cairo, Ill., to Poplar Bluff, Mo.	73.73	.....	6	3,686 50	.....	50 00	
10503		Pacific to Vineta, Ind. T. ....	327.25	.....	6	32,725 00	.....	100 00	
10504		Saint Louis to Kansas City .....	271.75	.....	6	48,915 00	.....	180 00	
10505		{ Quincy, Ill., to Saint Joseph, Mo. }	202.5	.....	13	40,454 25	.....	237 50	
		{ Branch, Palmyra to Hannibal .. }	15	.....	19		.....	75 00	



1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353</
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	--------

## REPORT OF THE POSTMASTER-GENERAL.

## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
			Miles.	Miles.		Dollars.	Dollars.	Dollars.	Old rate of pay.
10014	TENNESSEE—Continued.		23	.....	6	690 00	.....	30 60	
	Tracy City to Cowan .....	Tennessee Coal and Railroad Company.		.....			.....		
10015	Memphis to Covington .....	Paducah and Memphis .....	38.31	.....	6	1,532 40	.....	40 00	
10095	Jasper to Bridgeport, Ala. ....	Nashville and Chattanooga .....	12	.....	6	360 00	.....	30 00	
10123	Nashville to Lebanon .....	Tennessee and Pacific .....	32.75	.....	6	1,637 50	.....	50 00	
				1,228.153			149,459 19		
	KENTUCKY.								
9605	Ashland to Coalton .....	Lexington and Big Sandy .....	11	.....	6	325 00	.....	29 54	Do.
9606	Covington to Nicholasville .....	Kentucky Central .....	99	.....	12	10,550 00	.....	100 00	
9607	La Grange to Lexington .....	Louisville, Cincinnati & Lexington .....	13	.....	6		.....	50 00	
9607a	Cincinnati, Ohio, to Louisville, Ky .....	.....do .....	67	.....	12	6,700 00	.....	100 00	
9608	Louisville to Nashville, Tenn .....	.....do .....	111.5	.....	12	22,300 00	.....	200 00	
8609	Bardstown Junction to Bardstown .....	Louisville and Nashville .....	186.6	.....	12	38,719 50	.....	207 50	
	{ Lebanon Junction to Fish Point } .....	.....do .....	17.3	.....	6	692 00	.....	40 00	
9610	{ Branch, Richmond Junction to } .....	.....do .....	109.9	.....	6	7,624 60	.....	54 00	
	Richmond. ....	.....do .....	33.8	.....	6		.....	50 00	
9611	Bowling Green to Guthrie .....	.....do .....	51	.....	13	7,956 00	.....	156 00	
9612	Paducah to Trimble, Tenn .....	Paducah and Gulf .....	76.64	.....	6	3,832 00	.....	50 00	Pay estimated.
9612a	Evansville, Ind., to Guthrie, Ky ..	Saint Louis and Southeastern .....	110.66	.....	7	11,951 28	.....	108 00	
9738	Elizabethtown to Paducah .....	Louisville, Paducah and Southwestern. ....	185	.....	6	15,725 00	.....	85 00	Old rate of pay.
9742	Glasgow Junction to Glasgow .....	Louisville and Nashville .....	12	.....	6	600 00	.....	50 00	
9796a	Anchorage to Shelbyville .....	Louisville, Cincinnati & Lexington .....	19	.....	6	950 00	.....	50 00	Do.
9824	Grayson to Greenup Court-House ..	Eastern Kentucky .....	23.75	.....	6	950 00	.....	40 00	
9842	Owensborough to Owensborough Junction. ....	Owensborough and Russellville ..	26.13	.....	6	1,083 90	.....	30 00	Do.
9843	Mayaville to Paris .....	Mayaville and Lexington .....	50	.....	12	2,950 00	.....	59 00	
9846a	Lexington to Mount Sterling .....	Louisville, Cincinnati & Lexington ..	33.84	.....	6	1,692 00	.....	50 00	
				1,247 12			134,601.28		
9801	OHIO.								
9802	Bellville to Columbus .....	Central Ohio .....	137.875	.....	12	24,124 12	.....	175 00	
9803	Pittsburgh, Pa., to Chicago, Ill. ....	Pittsburgh, Fort Wayne and Chicago. ....	409.5	.....	12	140,850 00	.....	300 00	
9804	Harrisburg, Pa., to Ballast, Ohio ..	Cleveland and Pittsburgh .....	64.75	.....	14	6,875 00	.....	100 00	

No.	From	To	Amount	Remarks	Amount	Remarks
0001	Hudson to Columbus	Cleveland, Mount Vernon and Ind. awards	145.00		8	8,023.40
0006	Cleveland to Sharon, Pa.	Atlantic and Great Western	48.75		8	6,835.50
0007	Cleveland to Wellsville	Cleveland and Pittsburgh	32.61		6	100.00
0008	Elyria to Millbury	Lake Shore and Michigan Southern	102.36		16	158.00
0009	Bayard to New Philadelphia	Cleveland and Pittsburgh	32.5		6	705.00
0010	Oneida Mills to Carrollton	Carrollton and Oneida	13		6	50.00
0011	Sandusky to Newark	Baltimore, Ohio, Levee	116.25		6	41.66
0012	Xenia to Dayton	Pittsburgh, Cincinnati and Saint Louis	17		12	100.00
0013	Springfield to Sandusky	Cincinnati, Sandusky and Cleveland	131.35		12	94.00
0015	Columbus to Delaware	Cleveland, Columbus, Cincinnati and Indianapolis	24.75		24	Do.
0016	Columbus to Xenia	Columbus and Xenia	55		6	120.00
0017	Columbus to Indianapolis, Ind.	Columbus, Chicago and Indiana Central	188		12	210.00
0018	Gallion to Indianapolis, Ind.	Cleveland, Columbus, Cincinnati and Indianapolis	304		12	166.00
0019	Manchester to Hillsborough	Marietta and Cincinnati	31		6	185.00
0020	Portsmouth to Reed's Mills	do	56		6	50.00
0022	Toledo to Keokuk, Iowa	Toledo, Wabash and Western	198		12	100.00
0024	Frement to Saint Mary's	Lake Erie and Lorainville	256		12	253.00
0025	Carey to Findlay	Cincinnati, Sandusky and Cleveland	4		12	273.00
0026	Dayton to Union City, Ind.	Dayton and Union	42.17		6	90.00
0027	Dayton to Toledo	Dayton and Michigan	142.96		18	60.00
0028	Hamilton to Indianapolis, Ind.	Cincinnati, Hamilton and Dayton	90.49		6	150.00
0029	Hamilton to Richmond, Ind.	Cincinnati, Richmond and Chicago	45.1		6	50.00
0030	Cincinnati to Dayton	Cincinnati, Hamilton and Dayton	26.53		43	118.00
0031	Cincinnati to Springfield	Pittsburgh, Cincinnati and Saint Louis	31.92		28	187.50
0032	Cincinnati to Parkersburg, W. Va.	Marietta and Cincinnati	63.96		13	150.00
0033	Morrow to Dresden	Pittsburgh, Cincinnati and Saint Louis, Levee	19		6	210.00
0034	White Water Valley	White Water Valley	42		6	50.00
0035	Pittsburgh, Cincinnati and Saint Louis	Pittsburgh, Cincinnati and Saint Louis	70.45		6	175.00
0036	Cincinnati, Sandusky and Cleveland	Cincinnati, Sandusky and Cleveland	45.80		6	75.00
0037	Springfield to Columbus	Atlantic and Great Western	388.55		12	85.00
0038	Salamance, N. Y. to Dayton, Ohio	Pittsburgh, Fort Wayne and Chicago	22.8		6	62.50
0039	Youngstown to Cross Cut				12	210.00
					6	50.00
					6	50.00
					12	Do.
					6	90.00
					6	50.00

## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	OHIO—Continued.		Miles.	Miles.		Dollars.	Dollars.	Dollars.	
9040	{ Columbus to Athens..... Branch, Logan to New Straitsville. Niles to New Lisbon.....	Columbus and Hooking Valley .....	{ 77.4 13.02	..... ..... .....	12 } 12 }	7,293 30	.....	{ 87 50 40 00	
9041	Newark to Shawnee .....	Atlantic and Great Western, lessees.	33.94	.....	6	1,697 00	.....	50 00	
9042	Clinton to Massillon .....	Newark, Somerset and Straitsville	44.45	.....	12	1,761 80	.....	40 00	
9043	Marietta to Canal Dover.....	Cleveland, Mount Vernon and Delaware.	13.7	.....	6	542 00	.....	40 00	
9044	Black River to Ulrichsville .....	Marletta and Pittsburgh .....	99.47	.....	6	3,978 80	.....	40 00	
9045	Cleveland to Cincinnati.....	Lake Shore and Tuscarawas Valley	102.45	.....	6	5,122 50	.....	50 00	
9046	Mansfield to Toledo .....	Cleveland, Columbus, Cincinnati and Indianapolis.	245.25	.....	12	55,181 25	.....	225 00	
9047	Harbor to Youngstown .....	Pennsylvania, lessees .....	88.1	.....	6	5,286 00	.....	60 00	
9048	Toledo to Elkhart, Ind.....	do .....	62.1	.....	6	3,105 00	.....	50 00	
	INDIANA.	Lake Shore and Michigan Southern	133.6	5,056,575	6	76,820 00	845,962 38	575 00	
12001	Indianapolis to Vincennes .....	Indianapolis and Vincennes.....	116.32	.....	6	5,816 00	.....	50 00	
12002	Indianapolis to Terre Haute .....	Terre Haute and Indianapolis .....	73	.....	21	14,600 00	.....	200 00	
12003	Indianapolis to Cincinnati, Ohio ..	Indianapolis, Cincinnati and Lafayette.	113.5	.....	18	30,418 00	.....	268 00	
12004	Indianapolis to Peru.....	Indianapolis, Peru and Chicago....	{ 54 24	..... .....	18 } 6 }	10,500 00	.....	{ 150 00 75 00	{ \$600 per annum included for side service.
12005	Columbus to Madison .....	Indianapolis, Cincinnati and La Fayette.	65.625	.....	18	17,193 75	.....	262 00	
12006	New Albany to Indianapolis .....	Jeffersonville, Madison and Indianapolis.	46	.....	6	9,300 00	.....	50 00	
12007	New Albany to Michigan City.....	do .....	114	.....	18	15,276 00	.....	134 00	
12008	Richmond to Chicago, Ill.....	Louisville, New Albany and Chicago.	{ 61 227	..... .....	12 } 6 }	14,400 00	.....	50 00	Old rate of pay.
12009	Cincinnati, Ohio, to East Main	Pittsburgh, Cincinnati and Saint Louis.	223.5	.....	12	16,912 50	.....	75 00	
12010	Laurens, Ill	Ohio and Mississippi.....	341	.....	12	68,200 00	.....	200 00	



## REPORT OF THE POSTMASTER-GENERAL.

## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
			Miles.	Miles.		Dollars.	Dollars.	Dollars.	
11409	ILLINOIS—Continued.								
	{ Rushville to Yates City .....	Chicago, Burlington and Quincy ..	{ 63.75	.....	6 }	6,525 00	.....	60 00	\$150 per annum included for mail-messenger service. \$600 per annum included for ferriago. Pay estimated.
11410	{ Branch, Elmwood to Buda .....	Sycamore and Courtland .....	{ 45	.....	6 }	400 00	.....	80 00	
	Courtland Station to Sycamore .....		5	.....	12				
11411	{ State Line, Ind., to Warsaw, Ill. }	Toledo, Peoria and Warsaw .....	{ 228.75	.....	6	15,240 00	.....	64 00	
	{ Branch, La Harpe to Burlington, Ill., Iowa. }		{ 19.25	.....	6	962 50	.....	50 00	
11412	Bureau Junction to Peoria .....	Chicago, Rock Island and Pacific ..	47	.....	6	4,230 00	.....	90 00	
11413	Joliet to Lake Station, Ind. ....	Michigan Central .....	45	.....	6	1,800 00	.....	40 00	
11414	Peoria to Jacksonville .....	Peoria, Pekin and Jacksonville .....	87.4	.....	6½	6,535 00	.....	75 00	
11415	Peoria to Galesburgh .....	Chicago, Burlington and Quincy ..	54	.....	6	8,370 00	.....	155 00	
11416	Bloomington to Godfrey .....	Chicago and Alton .....	{ 111.4	.....	12 }	18,948 00	.....	130 00	
			{ 40.6	.....	12 }		.....	110 00	
11417	Galesburgh to Quincy .....	Chicago, Burlington and Quincy ..	100	.....	18	19,000 00	.....	190 00	
11418	Dubuque, Iowa, to Centralia, Ill. .	Illinois Central .....	344	.....	12	48,160 00	.....	140 00	
11419	Terre Haute, Ind., to East Saint Louis, Ill. ....	Indianapolis and Saint Louis .....	189	.....	12	40,635 00	.....	215 00	
11421	Carbondale to Grand Tower .....	Grand Tower Mining, Manufacturing, and Transportation Company. ....	25	.....	9	1,000 00	.....	40 00	
11422	East Saint Louis to Du Quoin .....	Saint Louis, Alton and Terre Haute ..	71.8	.....	12	7,180 00	.....	100 00	
11424	{ Washington to Dwight .....	Chicago and Alton .....	{ 60.21	.....	12 }	3,540 50	.....	50 00	
	{ Branch, Varna to Lacon .....		{ 10.6	.....	12 }		.....		
11425	East Saint Louis to Terre Haute, Ind. ....	Terre Haute and Indianapolis, Ind. ....	165.4	.....	12	28,945 00	.....	175 00	
11426	Decatur to East Saint Louis .....	Toledo, Wabash and Western .....	112	.....	12	17,696 00	.....	158 00	
11427	Pekin to Decatur .....	do .....	68.46	.....	6	3,423 00	.....	50 00	
11428	Peoria to Rock Island .....	Peoria and Rock Island .....	92	.....	12	5,520 00	.....	60 00	
11429	Sterling to Alton Junction .....	Rockford, Rock Island and Saint Louis. ....	{ 170	.....	12 }	24,372 00	.....	90 00	
			{ 100.8	.....	18 }		.....		
11430	Sagetown to Kalthaburgh .....	do .....	18	.....	6	540 00	.....	30 00	
11431	Quincy to Louisiana .....	Quincy, Alton and Saint Louis .....	43	.....	6	3,440 00	.....	60 00	
11432	Burlington, Iowa, to Quincy, Ill. ....	Chicago, Burlington and Quincy .....	71.85	.....	6	6,304 75	.....	75 00	
11433	Keosauqua to Shawneetown .....	Shawneetown and Illinois Southern ..	220.7	.....	6	17,237 50	.....	75 00	
11434	Chicago to Danville .....	Chicago, Danville and Vincennes ..	127	.....	0	5,432 00	.....	54 00	Pay for 104 miles, 19 miles covered by other service.



Year	Branch, McLeanborough to Shawanawau.	Saint Louis and Southeastern	41 95	30, 145 00	110 00
11901	Streator to Aurora	Chicago, Burlington and Quincy	60 70	4, 147 40	60 00
11902	Branch, Aurora to Batevia	do	9	3, 200 50	50 00
11903	Manitowish to Clinton	Toledo, Wabash and Western	64 10	4, 291 25	50 00
11904	Hannibal, Mo., to Naples, Ill	Chicago and Illinois Southern	45 5	1, 966 40	40 00
11905	Branch, Mayeville to Pittsfield	Chicago and Illinois Southern	6	5, 540 00	50 00
11906	Mattoon to Harvey City	Chicago and Illinois Southern	31 86	1, 255 60	40 00
11907	Springfield to Gilman	Chicago and Illinois Southern	111 6	5, 402 00	50 00
11908	Carbondale to Marion	Chicago and Illinois Southern	18	2, 100 00	40 00
11909	Jacksonville to Virden	Chicago and Illinois Southern	31 30	5, 402 00	40 00
11910	Urbana to Havana	Chicago and Illinois Southern	102 7	2, 100 00	50 00
11911	Branch, White Heath to Decatur	Chicago and Illinois Southern	22 35	3, 965 60	40 00
11912	Chester to Tamaroa	Chicago and Illinois Southern	42	3, 941 20	40 00
11913	Aurora to Foreston	Chicago and Illinois Southern	81 64	1, 928 00	40 00
11914	Decatur, Ill	Chicago and Illinois Southern	98 53	5, 621 50	50 00
11915	Springfield to Virden	Chicago and Illinois Southern	41 9	10, 963 75	70 00
11916	Chicago to Foreston	Chicago and Illinois Southern	116 43	1, 900 00	50 00
11917	Streator to Aurora	Chicago and Illinois Southern	156 625	1, 889 20	40 00
11918	Streator to Aurora	Chicago and Illinois Southern	36	3, 591 40	55 00
11919	Streator to Aurora	Chicago and Illinois Southern	47 23	15, 548 75	175 00
11920	Streator to Aurora	Chicago and Illinois Southern	65 98	6, 431 00	50 00
11921	Chicago to Milwaukee, Wis	Chicago and Illinois Southern	88 25	4, 550 00	50 00
11922	Streator to Windsor	Chicago and Illinois Southern	192 68	1, 000 00	50 00
11923	East Saint Louis to Murphreeborough	Chicago and Illinois Southern	91	3, 480 00	40 00
11924	Chicago to Elgin	Chicago and Illinois Southern	36	843, 834 90	843, 834 90
11925	Decatur to Montezuma	Chicago and Illinois Southern	87	8, 093 75	125 00
11926	Toledo, Ohio, to Detroit, Mich	Lake Shore and Michigan Southern	64 75	2, 625 00	75 00
11927	Monroe to Adrian	do	35	2, 360 00	50 00
11928	Adrian to Jackson	do	47 2	2, 874 75	75 00
11929	White Pigeon to Kalamazoo	do	22 33	60, 615 62	912 50
11930	Detroit to Chicago, Ill	Michigan Central	76	19, 950 00	105 00
11931	Detroit to Grand Haven	Detroit and Milwaukee	909 25	5, 353 50	83 00
11932	Detroit to Port Huron	Grand Trunk	190	5, 469 10	57 00
11933	Port Huron to Detroit	Fort Wayne, Jackson and Saginaw	64 5	11, 290 00	50 00
11934	Port Huron to Detroit	Michigan Central	96 3	7, 087 50	75 00
11935	Port Huron to Detroit	Michigan Central	225 8	4, 121 25	70 00
11936	Port Huron to Detroit	Michigan Central	94 5	7, 730 00	50 00
11937	Port Huron to Detroit	Michigan Central	58 675	15, 810 00	120 00
11938	Port Huron to Detroit	Michigan Central	14 6	4, 156 79	57 00
11939	Port Huron to Detroit	Michigan Central	132		
11940	Port Huron to Detroit	Michigan Central	90 47		

## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and terminl.	Corporate title of company carrying the mail.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
	MICHIGAN—Continued.		Miles.	Miles.		Dollars.	Dollars.	Dollars.	
12517	Detroit to Howard City.....	Detroit, Lansing and Lake Michigan.	164.67	.....	6	10,703 55	.....	65 00	
12518	Fort Wayne, Ind., to Walton, Mich.	Grand Rapids and Indiana.....	260.1	.....	6	13,005 00	.....	50 00	
12519	Kalamazoo to South Haven.....	Michigan Central.....	39.81	.....	6	1,990 50	.....	50 00	
12520	Lansing to Fort Wayne Junction, Ind.	Chicago and Lake Huron.....	162.92	.....	6	8,446 00	.....	50 00	
12521	New Buffalo to Pent Water.....	Chicago and Michigan Lake Shore	165.5	.....	12 }	15,503 00	.....	86 00	
12522	Branch, Holland to Grand Rapids }	Chicago and Lake Huron.....	25.4	.....	12 }	3,400 00	.....	50 00	
12523	Port Huron to Flint.....	Michigan Lake Shore.....	68	.....	6	3,437 50	.....	50 00	
12525	Monteith to Muskegon.....	Detroit, Hillsdale and Indiana.....	68.75	.....	6	2,943 00	.....	45 00	
12525	Ypsilanti to Banker's.....	Michigan Central.....	65.4	.....	6	5,150 00	.....	50 00	
12526	Jackson to Niles.....	Grand Rapids, Newaygo and Lake Shore.	103	.....	6	1,820 00	.....	50 00	
12527	Grand Rapids to Newaygo.....	Michigan Central.....	36.4	.....	6	610 00	.....	50 00	
12528	Niles to South Bend.....	Lake Shore and Michigan Southern	12.2	.....	6	3,043 50	.....	50 00	
12529	Jonesville to Lansing.....	Detroit and Bay City.....	60.87	.....	6	7,556 84	.....	68 00	
12529a	Detroit to Bay City.....	Chicago and Northwestern.....	111.13	.....	6	5,288 70	.....	85 00	
12846	Esconawba to Negaunee.....	Marquette and Ontonagon.....	62.92	.....	6	1,050 00	.....	75 00	
12847	Negaunee to Marquette.....	do.....	14	.....	6	900 00	.....	50 00	
12849	Negaunee to Champion.....	do.....	18	.....	6	573 75	.....	30 00	
12948	Flint to Otter Lake.....	Saginaw Valley and Saint Louis..	19.125	.....	6	1,338 80	.....	40 00	
12949	Saginaw to Saint Louis.....	Chicago and Northwestern.....	33.47	.....	6	9,741 00	.....	85 00	
12950	Fort Howard, Wis., to Esconawba,	Chicago and Michigan Lake Shore	114.6	.....	6	1,699 20	.....	30 00	
12953	Muskegon to Big Rapids.....	Detroit, Lansing and Lake Michigan.	56.64	.....	6	1,012 00	.....	40 00	
12954	Ionia to Stanton.....	Continental Improvement Company.	25.3	.....	6	1,444 30	.....	55 00	
12955	Walton to Traverse City.....	Toledo, Canada Southern and Detroit.	26.26	.....	6	2,818 50	.....	50 00	Pay estimated.
12956	Toledo, Ohio, to Detroit, Mich.....	do.....	56.37	.....	6	3,497 50	.....	50 00	Do.
12957	Grosse Ile to Fayette.....	Michigan Midland and Canada.....	69.95	.....	6	2,837 00	.....	50 00	Do.
12958	Saint Clair to Richmond.....	Grand Rapids and Indiana.....	16.74	.....	6	3,540 00	.....	50 00	Do.
12959	Walton to Petoskey.....	.....	70.40	.....	3	.....	.....	.....	.....
				3,371.2			902,936 00		

**\$60 per annum included for  
mail-messenger service.**

**Pay estimated.**

Line	Route	Stations	Length, Miles	Value, \$	Cost, \$	Revenue, \$	Profit, \$
11001	Chicago, Ill., to Green Bay, Wis.	Chicago, Ill., to Green Bay, Wis.	149	51,450 00	149	216 00	216 00
11002	Kenosha to Rockford, Ill.	Kenosha to Rockford, Ill.	63	4,416 00	63	60 00	60 00
11003	Racine to Rock Island Junction, Ill.	Racine to Rock Island Junction, Ill.	73.6	13,258 00	149.4	70 00	70 00
11004	Milwaukee to North McGregor, Iowa.	Chicago, Milwaukee and Saint Paul.	197.2	24,650 00	197.2	125 00	125 00
11005	Milwaukee to La Crosse.	do	198	45,540 00	198	230 00	230 00
11006	Milwaukee to Berlin.	do	94.8	8,532 00	94.8	90 00	90 00
11007	Milton Junction to Monroe.	do	42.8	2,140 00	42.8	50 00	50 00
11008	do	do	38.45	2,845 00	38.45	190 00	190 00
11009	do	do	45.35	2,968 50	45.35	50 00	50 00
11010	do	do	16.25	650 00	16.25	40 00	40 00
11011	Warren to Mineral Point.	Mineral Point.	23	1,650 00	23	50 00	50 00
11012	Sheboygan to Princeton.	Sheboygan and Fond du Lac.	79.05	4,803 00	64	60 00	60 00
11013	Caledonia Station, Ill., to Winona Junction, Wis.	Chicago and Northwestern.	190.35	14,276 25	6	75 00	75 00
11014	Elroy to Saint Paul, Minn.	West Wisconsin.	198.40	19,840 00	12	180 00	180 00
11015	Branch, Stillwater Junction, Minn., to Stillwater.	do	3.25	97 50	6	30 00	30 00
11016	Calumet to Platteville.	Mineral Point.	18.7	835 00	6	50 00	50 00
11017	Madison to Portage City.	Chicago and Superior.	39.5	1,975 00	6	50 00	50 00
11018	Winona, Minn., to Winona Junction, Wis.	Chicago and Northwestern.	29	6,020 00	12	215 00	215 00
11019	Menasha to Calby.	Phillips and Colby, operating Wisconsin Central.	114.90	6,853 00	4	60 00	60 00
11020	do	Wisconsin Valley.	49	2,490 00	6	50 00	50 00
11021	Oshkosh to Ripon.	Wisconsin, Lake Shore and Western.	85	7,475 00	6	67 00	67 00
11022	Green Bay to Winona, Minn.	do	44.5	1,050 00	6	50 00	50 00
11023	Milwaukee to Green Bay.	do and Saint Paul & Pepin.	216.41	10,820 50	6	50 00	50 00
11024	Branch, Hilbert to Menasha.	operating Wisconsin Central.	111.54	6,377 00	12	50 00	50 00
11025	do	do	16	2,382.1	12	50 00	50 00
11026	Des Moines Valley.	Des Moines Valley.	240.7	18,727 50	12	75 00	75 00
11027	Chicago, Burlington and Quincy.	Chicago, Burlington and Quincy.	48.75	3,420 00	6	20 00	20 00
11028	Burlington and Missouri River.	do	279.14	58,828 00	12	900 00	900 00
11029	Chicago, Rock Island and Pacific.	do	50	19,366 20	12	60 00	60 00
11030	do	do	382.77	60,858 00	6	375 00	375 00
11031	Dubuque and Southwestern.	do	264	3,322 90	6	250 00	250 00
11032	Illinois Central.	do	55.37	35,001 84	6	107 00	107 00
11033	Central Railroad Company of Iowa.	do	337.12	9,460 00	12	50 00	50 00
11034	Milwaukee and Saint Paul.	do	189.2	6,390 00	6	50 00	50 00
11035	Illinois Central.	do	137.6	5,040 00	6	63 00	63 00
11036	Davenport to Missouri River.	do	60	5,040 00	6	63 00	63 00
11037	Farmington to Cedar Rapids.	do	55.37	3,322 90	6	107 00	107 00
11038	Dubuque to Sioux City.	do	337.12	9,460 00	12	50 00	50 00
11039	Albia to Northwood.	do	189.2	6,390 00	6	50 00	50 00
11040	Calmar to Algonquin.	do	137.6	5,040 00	6	63 00	63 00
11041	Waterloo to Mena.	do	60	5,040 00	6	63 00	63 00

## REPORT OF THE POSTMASTER-GENERAL.

## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail.	Distance. Miles.	Total distance in each State. Miles.	Number of trips per week.	Annual pay. Dollars.	Annual pay in each State. Dollars.	Annual cost per mile on each route.	Remarks.
IOWA—Continued.									
11011	{ Missouri Valley to Sioux City } { Branch, California Junction to } Wisner, Nebr.	Sioux City and Pacific .....	{ 76 83.4 }	.....	{ 6 6 }	10,630 00	.....	{ 85 00 50 00 }	
11012	Burlington to Plymouth .....	Burlington, Cedar Rapids and Minnesota.	228	.....	6	17,100 00	.....	75 00	
11013	Davenport to Fayette .....	Davenport and Saint Paul .....	{ 90 39.33 }	.....	{ 6 6 }	6,466 50	.....	{ 50 00 50 00 }	Pay estimated.
11014	Davenport to Maquoketa .....	do .....	42.76	.....	6	1,454 00	.....	34 00	
11015	Clinton to Anamosa .....	Iowa Midland .....	74.1	.....	6	2,964 00	.....	40 00	
11016	Clinton to La Crescent Junction, Minn.	Chicago, Dubuque and Minnesota.	179.77	.....	6	10,786 20	.....	60 00	
11017	Sabula to Marion .....	Milwaukee and Saint Paul .....	87.75	.....	6	3,510 00	.....	40 00	
11018	Creston to Hopkins, Mo. ....	Burlington and Missouri River .....	44.4	.....	6	2,644 00	.....	60 00	
11019	Vic's Junction to Unionville, Mo.	Burlington and Southwestern .....	104.75	.....	6	5,447 00	.....	52 00	
11003, 3d p't	Chariton to Leon .....	Burlington and Missouri River .....	37.44	.....	6	1,872 00	.....	50 00	
11003 4th p't	Villisca to Clarinda .....	do .....	16	.....	6	890 00	.....	50 00	
11005a	{ Des Moines to Indianola .....	Chicago, Rock Island and Pacific .....	{ 21.4 27.1 }	.....	{ 6 6 }	2,425 00	.....	50 00	
11005b	Washington to Sigourney .....	do .....	29	.....	6	1,160 00	.....	40 00	
11012a	Muscatine to Riverside .....	Burlington, Cedar Rapids and Minnesota.	32.23	.....	6	1,289 20	.....	40 00	
11012b	Cedar Rapids to Postville .....	do .....	99.8	.....	6	4,990 00	.....	50 00	
11016a	Conover to Decorah .....	Milwaukee and Saint Paul .....	9.5	.....	6	523 50	.....	55 00	
11017b	Stanwood to Tipton .....	Chicago and Northwestern .....	8.81	.....	6	440 50	.....	50 00	
11020a	Beulah to Elkader .....	Iowa Eastern .....	17.75	.....	6	887 50	.....	50 00	
11012c	Vinton to Traer .....	Burlington, Cedar Rapids and Minnesota.	24.77	.....	6	990 80	.....	40 00	
				3,413.91			316,804.94		
13501	La Crosse, Wis., to Winnebago City, Minn.	Southern Minnesota .....	170.5	.....	6	10,230 00	.....	60 00	
11701	{ Winnebago to Saint Peter } { Branch, Maquoketa Junction to } Maquoketa	Winnebago and Saint Peter .....	{ 141.15 6.05 }	.....	{ 6 6 }	12,376 00	.....	23 00	

13305	Saint Paul to Sioux City, Iowa	915.7	Saint Paul and Sioux City	371	10,413 00	90 00	26 miles covered by another route.
13306	Saint Paul to Breckenridge	819.25	Saint Paul and Pacific	371	14,930 25	77 25	
13307	Saint Paul to Sauk Rapids	78	do		10,062 50	50 00	
13308	Saint Paul to Du Luth	156	Lake Superior and Mississippi		5,330 00	75 00	
13311	Anthon to Mason City, Iowa	41.39	Chicago, Milwaukee and Saint Paul		11,700 00	75 00	
13312	Saint Paul to Stillwater	94.95	Lake Superior and Mississippi		1,635 20	40 00	
13313	Saint Paul to Winona	103.94	Chicago, Milwaukee and Saint Paul		1,600 00	50 00	Pay for 13.2 miles; 11.75 miles covered by another route.
13314	Hastings to Glencoe	74.59	do		90,768 00	200 00	
13337	White Bear Lake to Sioux City Junction.	41	Minneapolis and Saint Louis		3,720 50	50 00	
13339	Du Luth to Blomark, Dak.	229	Northern Pacific		2,054 00	50 00	
13339	Saint Peter to Marshall	193.12	do		24,183 00	63 00	23 miles covered by Route 13508.
13340	East Saint Cloud Station to Melrose.	23	Chicago and Northwestern		5,483 00	50 00	Pay estimated.
13341	Winona to La Crescent	109.66	Saint Paul and Pacific		1,750 00	50 00	
14401	Omaha to Ogden City, Utah	25	Chicago, Milwaukee and Saint Paul		1,250 00	50 00	
14451	Plattsmouth to Kearney Junction	191	Union Pacific		325,143 00	315 00	
14478	Omaha to Herman	40.2	Burlington and Missouri River Railroad in Nebraska.		13,370 00	70 00	
14479	Omaha to Concord	21.5	Omaha and Northwestern		2,010 00	50 00	
14483	Nebraska City to Seward	24.1	Burlington and Missouri River Railroad in Nebraska.		1,925 50	75 00	\$313 per annum included for ferrage.
14497	Crete to Beatrice	31.76	Midland Pacific		7,148 50	85 00	
			Burlington and Missouri River Railroad in Nebraska.		1,568 00	50 00	
					351,185 00		
14001	{ Kansas City, Mo., to Cheyenne, Wyo. Branch, Lawrence to Leavenworth.	745	Kansas Pacific		144,520 00	190 00	
14002	Atchison to Waterville	33	Central Branch Union Pacific		7,240 00	75 00	
14003	{ Lawrence to Coffeyville	100	Leavenworth, Lawrence and Galveston.		14,530 00	100 00	
14004	Atchison to Denver City	140.3	Saint Joseph and Denver City		12,496 00	50 00	
14005	Missouri River, Fort Scott and Gulf	10	Missouri River, Fort Scott and Gulf		16,400 00	300 00	
14006	Missouri, Kansas and Texas	227.2	Missouri, Kansas and Texas		9,390 00	60 00	
14143	Atchison, Topeka and Santa Fe	164.6	Atchison, Topeka and Santa Fe		37,668 75	75 00	
		156.5				70 00	
		470.25					
		26					

## B.—Railroad service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and termini.	Corporate title of company carrying the mail	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Annual cost per mile on each route.	Remarks.
			Miles.	Miles.		Dollars.	Dollars.	Dollars.	
14211	KANSAS—Continued.	Olathe to Ottawa.....	32	.....	6	3,200 00	.....	100 00	
14212		Atchison to Lincoln, Nebr.....	152.28	.....	6	9,136 80	.....	60 00	
14235		Leavenworth to Holton.....	56	.....	6	2,900 00	.....	50 00	
14311		Lawrence to Carbondale.....	32.9	.....	6	1,974 00	.....	60 00	
14314		Junction City to Clay Centre.....	33.85	.....	6	2,031 00	.....	60 00	
				2,379.28			261,066 55		
16419	NEVADA.	Virginia City to Reno.....	51.75	.....	6	3,741 00	.....	72 29	Old rate of pay.
				51.75			3,741 00		
14701	CALIFORNIA.	San Francisco to Ogden City, Utah	877.5	.....	7	204,457 50	.....	233 00	
14702		{ San Francisco to Soledad..... }	143.3	.....	14	11,464 00	.....	80 00	
14703		{ Branch, Gilroy to Hollister..... }	14	.....	7	700 00	.....	50 00	
14704		Roseville to Tehama.....	105	.....	7	13,125 00	.....	125 00	
14705		Folsom City to Shingle Springs.....	26	.....	6	1,300 00	.....	56 00	
14707		Sacramento City to Folsom City.....	23.2	.....	12	1,450 00	.....	62 50	
14708		{ Sacramento City to San Francisco }	83	.....	14	12,450 00	.....	150 00	Do.
14709		{ Branch, Davisville to Marysville..... }	42	.....	6	3,150 00	.....	75 00	
14723		Napa Junction to Calistoga.....	36	.....	6	1,800 00	.....	50 00	
14876		Marysville to Oroville.....	30	.....	6	1,500 00	.....	50 00	
14877		Wilmington to Los Angeles.....	22	.....	6	1,650 00	.....	75 00	
14880		Lathrop to Goshen.....	144.91	.....	6	11,592 80	.....	80 00	
14881		Elmira to Vacaville.....	4	.....	7	200 00	.....	50 00	
14890		San Francisco to Cloverdale.....	56	.....	6	2,800 00	.....	50 00	Do.
14891		{ Stockton to Milton..... }	30	.....	6	1,500 00	.....	50 00	
14945		{ Branch, Peters to Oakdale..... }	19	.....	6	950 00	.....	50 00	
		Goshen to Tipton.....	21	.....	7	1,575 00	.....	75 00	
				1,676.91			271,664 30		



43001	Kalamia to Tacoma.....	North Pacific, (Pacific division) ..	106.6	106.06	6	5,330 00	5,330 00	50 00	Pay estimated.
DAKOTA TERRITORY.									
13929	Sioux City, Iowa, to Yankton, Dak.	Dakota Southern .....	61.48	61.48	6	4,611 00	4,611 00	75 00	
UTAH TERRITORY.									
16633	Salt Lake City to Ogden City .....	Utah Central .....	36.5		6	2,920 00		80 00	Do.
16651	Ogden City to Franklin.....	Utah Northern.....	80.5	117	7	4,025 00		50 00	
COLORADO TERRITORY.									
17038	{ Denver to Black Hawk .....	Colorado Central.....	{ 32.5		7	2,310 00		60 00	Old rate of pay.
	{ Branch, Golden Junction to Longmont.		{ 39		7	1,950 00		50 00	
17051	{ Hughes Station to Erie .....	Denver and Boulder Valley .....	15		6	1,125 00		75 00	
	{ Denver to Pueblo.....	Denver and Rio Grande.....	119		7	8,330 00		70 00	
17064	Branch, Pueblo to Coal Creek.....	Denver and Arkansas Valley .....	35	246.5	6	1,750 00	15,465 00	50 00	

JOHN L. ROUTT,  
Second Assistant Postmaster-General.

## C.—Steamboat service as in operation on the 30th of June, 1874.

Number of route.	State and terminal.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Remarks.
		<i>Miles.</i>	<i>Miles.</i>		<i>Dollars.</i>	<i>Dollars.</i>	
	NEW HAMPSHIRE.						
316	{ Alton Bay to Wolfborough .....	10	.....	6	1,200 00	.....	During navigation, say 7 months. Do. Do.
320	{ Centre Harbor to Meredith Village .....	20	.....	3	828 57	.....	
321	{ Centre Harbor to West Ossipee .....	29	.....	6	650 00	.....	
	{ Weir's Bridge to Wolfborough .....	30	.....	6		2,678 57	
	MASSACHUSETTS.						
688	Wood's Hole to Nantucket .....	30	.....	6	2,500 00	.....	
	NEW YORK.						
1389	Whitehall to Rouse's Point .....	130	.....	11	6,000 00	.....	During navigation, say 8 months.
1694	Geneva to Watkins .....	65	.....	6	3,200 00	.....	
	NEW JERSEY.						
2105	New York to South Amboy .....	27	.....	12	1,620 00	.....	Six times a week 8 months; three times a week 4 months.
2126	New York to Sandy Hook .....	19½	.....	12	1,462 50	.....	
2141	New York to Keyport .....	25	.....	.....	654 00	.....	
			71½	.....		3,736 50	
	PENNSYLVANIA.						
2501	Pittsburgh to Greensborough .....	88½	.....	.....	6,011 25	.....	Six times a week during navigation; three times a week residue of year.
			88½	.....		6,011 00	
	MARYLAND.						
3521	Baltimore to Queenstown .....	40	.....	6	750 00	.....	Four times a week 8 months, to Crisfield, 108 miles; twice a week 4 months; twice a week 8 months; residue, 42 miles, once a week 4 months.
3696	Baltimore to Pitt's Wharf .....	150	.....	.....	5,400 00	.....	
			190	.....		6,150 00	
			.....	.....		.....	
	WEST VIRGINIA.						
4104	Wheeling to Parkersburgh .....	99	.....	6	7,900 00	.....	
4199	Parkersburgh to Gallipolis, Ohio .....	86	.....	3	4,305 00	.....	
4136	Kanawha (Court-House to Gallipolis, Ohio) .....	65	.....	3	1,724 50	.....	
			450	.....		13,319 50	

Ten months in the year.

Twice a month.

Twice a week to Chattahoochee, 140 miles; once a week reading.

Twice a month.

## VIRGINIA

4401 Washington, D. C., to Game Point, Va ..... 534  
 4417 Norfolk to Baltimore, Md ..... 900  
 4418 Norfolk to Eastville ..... 57  
 4419 Norfolk to Mathews & Court-House ..... 60  
 4420 Norfolk to Richmond ..... 151  
 4704 Washington, D. C., to Norfolk, Va ..... 218  
 4755 Frederickburgh to Baltimore, Md ..... 250

## NORTH CAROLINA.

5025 ..... 190  
 5037 ..... 106  
 5237 ..... 90  
 5276 ..... 30  
 5279 ..... 55  
 5284 ib, N. C ..... 75

## SOUTH CAROLINA.

5609 Beaufort to Hilton Head ..... 16  
 5714 Charleston to Edisto Island ..... 35

## GEORGIA.

6119 Trader's Hill to Fernandina, Fla ..... 69  
 6189 Home to Gadsden, Ala ..... 155

## FLORIDA.

6410 New York to Key West ..... 1560  
 6411 Baltimore, Md., to New Orleans, La ..... 1700  
 6412 New Troy to Cedar Keys ..... 165  
 6413 New Or. to New York, Va ..... 648  
 6414 Eufrata ..... 991

6419 Cedar ..... 925  
 6420 Platte ..... 83  
 6431 Platte ..... 141  
 6514 Key W ..... 286

## ALABAMA.

6630 Mobile to Selma ..... 309

## MISSISSIPPI.

7024 Vicksburgh to Greenwood ..... 260

14,707 50  
 14,000 00  
 3,500 00  
 2,000 00  
 4,500 00  
 6,000 00  
 2,500 00  
 51,307 50

1,745 00  
 4,500 00  
 290 00  
 600 00  
 600 00  
 1,450 00  
 9,185 00

260 00  
 1,300 00  
 1,460 00

1,294 00  
 3,600 00  
 4,894 00

31,200 00  
 31,200 00  
 2,500 00  
 76,000 00  
 11,500 00

7,448 00  
 5,700 00  
 5,500 00  
 7,473 00  
 176,523 00

5,200 00  
 5,200 00

7,500 00  
 7,500 00

13  
 0  
 3  
 9  
 3  
 2  
 2

2  
 3  
 1  
 2  
 1  
 2

1  
 2

1  
 2

1  
 1  
 1

1  
 6  
 2

2

2

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

534  
 900  
 57  
 60  
 151  
 218  
 250

190  
 106  
 90  
 30  
 55  
 75

16  
 35

69  
 155

1560  
 1700  
 165  
 648  
 991

925  
 83  
 141  
 286

309

260

## C.—Steamboat service as in operation on the 30th of June, 1874—Continued.

Number of route.	State and termini.	Distance.	Total distance in each State.	Number of trips per week.	Annual pay.	Annual pay in each State.	Remarks.
	LOUISIANA.	Miles.	Miles.		Dollars.	Dollars.	
8006	Vicksburgh, Miss., to New Orleans, La.	408	.....	3	29,980 00	.....	
8007	Brashear to New Iberia	70	.....	6	12,500 00	.....	
8010	New Orleans to Pilot Town	117	.....	2	7,264 00	.....	
8011	New Orleans to Covington	48	.....	3	4,500 00	.....	
8014	New Orleans to Saint Francisville	170	.....	2	18,000 00	.....	
8103	New Orleans to Grand Isle	96	.....	.....	2,300 00	.....	Twice a week 4 months, once a week 8 months.
8114	Lake Charles to Leesburgh	50	.....	2	4,880 00	.....	
8117	New Orleans to Red River Landing	210	.....	3	5,775 00	.....	
			1,169			85,199 00	
	TEXAS.						
8507	Galveston to Brashear, La.	220	.....	.....	50,000 00	.....	Three times a week 6 months, six times a week 6 months.
8508	Galveston to Indianola	130	.....	.....	10,000 00	.....	Twice a week 4 months, three times a week 8 months.
8510	Galveston to Liberty	98	.....	2	8,000 00	.....	
8685	Orange to Winess Bluff	150	.....	2	9,750 00	.....	
8750	Galveston to Sabine Pass	60	.....	2	5,000 00	.....	
			658			82,750 00	
	ARKANSAS.						
7504	Memphis, Tenn., to White River, Ark.	180	.....	3	21,500 00	.....	
7505	White River to Vicksburgh, Miss.	229	.....	3	27,000 00	.....	
7506	White River to Pine Bluff	182½	.....	2	10,990 00	.....	
7507	Pine Bluff to Little Rock	105	.....	2	6,000 00	.....	
7509	White River to Jacksonport	356	.....	2	11,800 00	.....	
7510	Jacksonport to Pocahontas	150	.....	2	5,000 00	.....	
7648	Memphis, Tenn., to Friar's Point, Ark.	112	.....	3	2,470 00	.....	
			1,314½			84,760 00	
	MISSOURI.						
10516	Saint Louis to Memphis, Tenn.	{ 120 330	.....	{ 6 3	26,320 00	.....	
			450			26,320 00	
	TENNESSEE.						
10516	London to Blackwood	45	.....	6	4,000 00	.....	
10517	Blackwood to Chattanooga	110	.....	6	10,500 00	.....	
			155			14,500 00	

9601	Louisville to Cincinnati, Ohio.....	143	.....	7	9,000 00	.....
9602	Louisville to Evansville, Ind.....	202	.....	6	15,000 00	.....
9603	Evansville, Ind., to Cairo, Ill.....	200	.....	6	15,000 00	.....
9744	Bowling to Evansville, Ind.....	225	.....	1	2,400 00	.....
9771	Paducah to Eastport, Miss.....	268	.....	2	6,000 00	.....
	OHIO.		1,038		47,400 00	
9061	Portsmouth to Cincinnati.....	127	.....	3	4,500 00	.....
9062	Cincinnati to Maysville, Ky.....	65	.....	3	2,000 00	.....
9063	{ Portsmouth to Huntington.....	51.35	.....	6 }	7,300 00	.....
	{ Huntington to Gallipolis.....	36.65	.....	3 }	13,800 00	
12564	Detroit to Sault de Ste. Marie.....	350	.....	2	1,600 00	.....
12643	Bay City to Alpena.....	143	.....	6	8,000 00	.....
12602	Grand Haven to Milwaukee, Wis.....	88	.....	6	2,730 00	.....
12839	Port Huron Railroad Station to Mackinaw.....	240	.....	3	845 00	.....
12850	Marquette to Hancock.....	76	.....	6	13,000 00	.....
12867	Cheboygan to Alpena.....	100	.....	1	590 00	.....
	MICHIGAN.		997		26,765 00	
13026	Oshkosh to New London.....	62½	.....	6	1,200 00	.....
13136	Berlin to Oshkosh.....	26	.....	6	800 00	.....
13366	Washington Harbor to Green Bay.....	96	.....	1	170 00	.....
	WISCONSIN.		184½		2,170 00	
13712	San Francisco to Petaluma.....	51	.....	6	4,000 00	.....
14799	San Francisco to Portland, Oreg.....	600	.....	.....	25,000 00	.....
14873	San Francisco to San Diego.....	600	.....	.....	25,000 00	.....
14892	San Francisco to Sacramento.....	230	.....	6	8,000 00	.....
	CALIFORNIA.		1,481		62,000 00	
15101	Portland to Astoria.....	{ 53	.....	6 }	13,000 00	.....
15102	Portland to The Dalles.....	{ 69	.....	3 }	18,000 00	.....
	OREGON.	120	.....	6	31,000 00	
15406	Olympia to Victoria.....	{ 66	.....	3 }	16,235 00	.....
15412	Seattle to Whatcom.....	108	.....	2 }	3,141 00	.....
15424	Portland, Oreg., to Sitka, Alaska Territory.....	143	.....	1	34,800 00	.....
15438	Port Townsend to Semiahmoo.....	1,400	.....	.....	8,500 00	.....
	WASHINGTON TERRITORY.	151	.....	1	62,676 00	
			1,868			

JOHN L. ROUTT,  
Second Assistant Postmaster-General.

D.—Table showing the increase and decrease in mail.

States and Territories.	CELERITY, CERTAINTY, AND SECURITY.				STEAMBOAT.				RAILROAD.			
	Length of routes.		Cost.		Length of routes.		Cost.		Length of routes.		Cost.	
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.
	Miles.	Miles.			Miles.	Miles.			Miles.	Miles.		
1 Maine*		26	\$10,315						88		\$45,263	
2 New Hampshire*		176	3,867		4		883		69		21,539	
3 Vermont*		118	7,455						15		20,605	
4 Massachusetts*		113		\$4,478					128		86,270	
5 Rhode Island*		36	2,411			160		\$2,500	22		5,112	
6 Connecticut*		57	2,472						67		12,843	
7 New York*		169	63,135			40	751		727		432,186	
8 New Jersey		22	287					586	79		20,920	
9 Pennsylvania	37		1,800						33		35,180	
10 Delaware		6		128							535	
11 Maryland		111		485	150		5,400		46			\$2,347
12 West Virginia	194		4,121					1,244	51		4,886	
13 Virginia	316		8,405		17		607		51		10,832	
14 North Carolina	95		1,453		130		2,326		29		633	
15 South Carolina	117		613						51			5,333
16 Georgia	391		6,761						252		17,418	
17 Florida	40		3,302		1,936		38,675					3,241
18 Alabama	588		30,343		309		5,200		13		10,013	
19 Mississippi	569		9,614			237		2,000	106		21,196	
20 Louisiana	173		14,855		45		2,794					
21 Texas	481		25,682		60		4,750		273		17,452	
22 Arkansas	340		24,933				7,167		165		7,215	
23 Missouri	309		27,516				5,320		320		125,831	
24 Tennessee	115		4,917				5,250		11		3,268	
25 Kentucky	131		1,059			20		3,600	18		18,302	
26 Ohio		405		2,180	1		966		179		67,107	
27 Indiana	9		2,165						60		36,039	
28 Illinois		61		826					399		150,996	
29 Michigan		222	1,875		51				74		146,071	
30 Wisconsin		166		2,709					396		57,952	
31 Iowa		20	658						145		61,930	
32 Minnesota	35		4,991						309		32,434	
33 Nebraska	601		13,760						10		45,149	
34 Kansas	1,352		34,852						53		23,745	
35 Nevada	71		7,683									
36 California	1,116		37,990		510	600	30,000		46		35,45	
37 Oregon	251		5,645		51				107		5,330	
38 Washington Ter.		69		8,102								
39 Idaho Ter.	128		4,230									
40 Montana Ter.	19		9,366									
41 Dakota Ter.	302		6,053									
42 Wyoming Ter.	20		364									
43 Utah Ter.	65			2,241					81		5,120	
44 Colorado Ter.	177		3,611						34		4,890	
45 New Mexico Ter.	240		10,400									
46 Arizona Ter.	498		17,080									
Total.....	8,780	1,777	416,039	21,149	2,664	1,057	79,289	39,930	4,337	60	1,421,827	32,347
	1,777		21,149		1,057		39,930		60		89,360	
	7,003		394,890		1,607		39,359		4,277		1,332,467	

\* Close of the first year of the new contract-term.

† Route from Rutland, Vt., to Bennington, transferred to New York section.  
Erie, Pa., to Cleveland, Ohio, transferred to New York section.  
Toledo to Cleveland, transferred to New York section.  
Toledo, Ohio, to Chicago, Ill., transferred to New York section.  
Toledo, Ohio, to Elkhart, Ind., transferred to Ohio section.



transportation and cost during the year ended June 30, 1874.

ANNUAL TRANSPORTATION—								ANNUAL COST.	
By celerity, certainty, and security.		By steamboat.		By railroad.		Total.		Total.	
Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.
Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.		
77,637	.....	.....	.....	206,857	.....	284,494	.....	\$55,578	.....
7,340	.....	.....	5,044	180,639	.....	182,935	.....	25,489	.....
970	.....	.....	.....	9,640	.....	8,670	.....	28,060	.....
.....	160,803	.....	20	163,746	.....	2,923	.....	81,792	.....
.....	8,606	.....	99,840	.....	9,732	.....	118,178	5,023	.....
.....	5,110	.....	.....	290,818	.....	285,708	.....	15,315	.....
261,737	.....	.....	23,573	1,467,876	.....	1,706,040	.....	496,072	.....
5,202	.....	22,820	.....	572,801	.....	600,823	.....	20,621	.....
608	.....	4,542	.....	1,436,109	.....	1,641,259	.....	36,980	.....
.....	1,716	.....	.....	.....	.....	.....	1,716	407	.....
.....	36,114	52,208	.....	.....	68,646	.....	52,552	\$3,332	.....
67,444	.....	.....	.....	31,824	.....	99,268	.....	7,763	.....
125,464	.....	3,744	.....	.....	31,077	98,131	.....	19,864	.....
36,048	.....	18,200	.....	18,357	.....	72,605	.....	4,412	.....
1,938	.....	.....	.....	19,698	.....	21,636	.....	4,720	.....
63,596	.....	.....	.....	.....	114,213	.....	50,617	24,179	.....
30,736	.....	178,320	.....	.....	.....	209,056	.....	38,696	.....
101,520	.....	64,272	.....	143,885	.....	309,677	.....	45,556	.....
37,496	.....	2,392	.....	300,790	.....	340,678	.....	28,810	.....
86,471	.....	45,240	.....	.....	.....	131,711	.....	17,649	.....
103,307	.....	12,480	.....	125,664	.....	241,451	.....	47,890	.....
179,168	.....	18,720	.....	80,415	.....	278,303	.....	39,315	.....
68,271	.....	.....	87,360	55,077	.....	35,988	.....	158,667	.....
53,722	.....	34,320	.....	134,601	.....	222,643	.....	14,035	.....
55,584	.....	.....	43,240	13,191	.....	25,535	.....	15,767	.....
.....	66,660	702	.....	.....	373,856	.....	439,814	65,893	.....
.....	55,520	.....	.....	87,757	.....	32,237	.....	38,204	.....
.....	35,245	.....	.....	828,089	.....	792,844	.....	159,170	.....
.....	29,330	833	.....	.....	500,866	.....	529,363	44,195	.....
.....	51,916	.....	.....	450,920	.....	399,004	.....	55,243	.....
6,612	.....	.....	.....	85,217	.....	91,829	.....	62,588	.....
12,386	.....	.....	.....	51,338	.....	69,724	.....	37,429	.....
146,172	.....	.....	.....	760,571	.....	906,743	.....	62,909	.....
242,400	.....	.....	.....	2,421	.....	244,821	.....	58,597	.....
44,524	.....	.....	.....	.....	.....	44,524	.....	7,683	.....
219,798	.....	.....	72,000	70,517	.....	218,315	.....	18,439	.....
27,320	.....	3,120	.....	.....	.....	30,440	.....	5,645	.....
.....	43,036	104	.....	66,518	.....	23,586	.....	2,772	.....
15,294	.....	.....	.....	.....	.....	15,294	.....	4,230	.....
6,240	.....	.....	.....	.....	.....	6,240	.....	9,366	.....
66,513	.....	.....	.....	.....	.....	66,513	.....	6,053	.....
2,080	.....	.....	.....	.....	.....	2,080	.....	364	.....
.....	8,820	.....	.....	58,765	.....	49,945	.....	2,879	.....
14,312	.....	.....	.....	42,669	.....	56,981	.....	8,501	.....
24,960	.....	.....	.....	.....	.....	24,960	.....	10,400	.....
51,792	.....	.....	.....	.....	.....	51,792	.....	17,080	.....
2,250,662	502,876	462,017	331,077	7,947,130	1,108,030	9,918,736	1,200,910	1,840,174	73,458
502,876	.....	331,077	.....	1,108,030	.....	1,200,910	.....	73,458	.....
1,747,786	.....	130,940	.....	6,839,100	.....	8,717,826	.....	1,766,716	.....

: Route from Newport, R. I., to New York, N. Y., abandoned by carriers; re-advertised; service to commence July 1, 1874.  
§ Corrected distance.

JOHN L. ROUTT,  
Second Assistant Postmaster-General.

E.—Table showing the weight of the mails, the speed with which they are conveyed, the season on railroad routes in the United States and Territories, the returns having been obtained

[ABBREVIATIONS.—f. f., fixtures and furniture, f. f. c., fixtures and furniture complete; m. c. mail line, t. l., triple line; q. l., quadruple line; r. a., route-agent; w. t., way trains. A number followed column refer to the order of the routes in this table.]

1	N. Y..	1001	1901	New York, Dunkirk .....	Erie .....	499	33
2	Mass.	605	605	Boston, Springfield .....	Boston and Albany .....	101	30
3	N. Y..	1079	1217	Albany, Buffalo .....	New York Cent'l & Hudson River .....	296	30
4	N. Y..	1002	1211	New York, Troy .....	do .....	150	31
5	N. J..	2103	.....	New York, New Brunswick .....	Pennsylvania .....	36	31
6	Mass.	605	605	Boston, Albany .....	Boston and Albany .....	203	30
7	N. J..	2104	.....	New Brunswick, Philadelphia .....	Pennsylvania .....	54	30
8	N. Y..	1039	1241	Buffalo, Chicago .....	Lake Shore & Michigan Southern .....	542	31
9	Pa....	2401	.....	Philadelphia, Pittsburgh .....	Pennsylvania .....	351	32
10	Md ..	.....	.....	Baltimore, Philadelphia .....	Philadelphia, Wilmington and Baltimore .....	100	32
11	N. Y..	1038	1906	Buffalo, Hornellsville .....	Erie .....	91	32
12	Ohio	9016	.....	Columbus, Xenia .....	Columbus and Xenia .....	55	32
13	Mass.	605	605	Springfield, Albany .....	Boston and Albany .....	102	30
14	N. Y..	1001	1207	Attica, Corning .....	Erie .....	111	32
15	Pa....	2476	.....	Allentown, Harrisburgh .....	Philadelphia and Reading .....	90	32
16	Pa....	2479	.....	Easton, Allentown .....	Lehigh Valley .....	16	32
17	Md ..	3502	.....	Baltimore, Sanbury .....	Northern Central .....	140	32
18	Md..	3504	.....	Washington, Wheeling .....	Baltimore and Ohio .....	353	32
19	Nebr	14401	34001	Omaha, Ogden .....	Union Pacific .....	1,032	32
20	Ohio ..	9036	.....	Columbus, Pittsburgh .....	Pittsburgh, Cincinnati & St. Louis .....	100	32
21	Cal ..	14701	46001	San Francisco, Ogden .....	Central Pacific .....	877	32
22	N. Y..	1282	1218	Rochester, Niagara Falls .....	New York Cent'l & Hudson River .....	76	32
23	Ohio ..	9022	.....	Toledo, Quincy .....	Toledo, Wabash and Western .....	476	32
24	Ill ....	11405	29007	Chicago, Burlington .....	Chicago, Burlington and Quincy .....	901	32

modulations for mails and agents, the trips per week, and the rates of pay per mile per annum, with a view to the re-adjustment of the pay in accordance with the act of March 3, 1873.

catchers; r. p. o., railway post-office; apt., apartment; b. c., baggage-car; a. l., single line; d. l., double by an asterisk (\*) shows the equivalent in round trips. The figures in parentheses in the "Remarks"

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
124,441	532,846	1781287	1175109	39,170	r. p. o., 50 by 9.6, f. f. c., d. l.; r. a. apt., 42 by 11, 26 by 11, 16 by 11, f. f. c., a. l., 66 m.	204*	\$375 00	.....	1
.....	.....	.....	1123264	37,442	r. p. o., (average,) 30.5 by 8.8, f. f., q. l.	2	375 00	.....	2
930,509	325,221	1255730	971,381	32,378	r. p. o., 48 by 9, f. f. c., d. l. to Rochester, 229 m., a. l. residue, 69 m.	34	375 00	.....	3
546,693	231,621	1078314	959,801	31,992	r. p. o., 48 by 9, f. f. c., d. l. ...	54	375 00	.....	4
547,203	324,321	871,524	839,925	27,997	r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 11 by 8.5, f. f., 24 l.	654*	375 00	.....	5
747,748	582,633	1330381	820,974	27,365	r. p. o., (average,) 30.5 by 8.8, f. f., q. l. to Springfield, 101 m.; d. l. residue, 102 m.	194*	375 00	102 miles at \$300, (13) ..	6
538,460	324,692	863,152	817,821	27,260	r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 11 by 8.5, f. f., d. l.	234*	375 00	.....	7
3137614	781,319	3918933	773,787	25,792	r. p. o., 51.6 by 10.9, f. f. c., d. l. 319.7 m., (Buffalo to Elyria, Millbury to Toledo, and Elkhart to Chicago,) with additional r. p. o. 41 by 10.9, f. f. c., a. l. 357.5 m., (Cleveland to Chicago.)	234*	375 00	Extended from Jan. 1, 1874, 453 miles, covering Ohio routes 9004 and 9021, and Mich. route 12501; weight in Mar., 1874.	8
652,368	319,277	971,645	649,429	21,647	r. p. o., 46 by 8.4, f. f. c., a. l.; r. a. apt., 10.9 by 8, f. f. c., a. l.	403*	375 00	.....	9
153,798	409,592	563,390	517,454	17,248	r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 24 by 9, f. f., q. l. to Lamokin, 144 m., d. l. to Wilmington, 134 m., and a. l. residue, 72 m.	283*	375 00	Main route; branch \$50, (506.)	10
556,529	344,891	601,420	499,020	16,634	r. p. o., 42 by 11, 26 by 11, 16 by 11, (average 28 by 11,) f. f. c., a. l.	224	375 00	.....	11
06,327	74,391	180,718	175,342	5,845	15.6 by 8.6, f. f., a. l. ....	24	325 00	.....	12
.....	.....	.....	533,357	17,778	r. p. o., (average,) 30.5 by 8.8, f. f., d. l.	13	300 00	Part; residue \$375, (6) ..	13
37,837	231,660	369,497	326,590	10,886	42 by 11, 26 by 11, 16 by 11, f. f. c., a. l.	194	300 00	.....	14
27,967	44,101	272,068	227,623	7,587	11.6 by 8.8, f. f., a. l. ....	21*	300 00	.....	15
06,289	36,655	242,954	224,703	7,490	22 by 8.6, f. f., 24 lines .....	36*	300 00	.....	16
33,471	107,041	240,512	112,406	3,746	r. p. o., 40 by 8.6, f. f., a. l.; r. a. apt., 14.6 by 8.6, f. f., a. l.	18	300 00	.....	17
14,221	187,627	531,848	342,102	11,403	r. p. o., 52.4 by 8.9, f. f., d. l. to Grafton, 254 m., a. l. res., 99 m.; r. a. apt., 17 by 8.74, f. f., a. l. between Grafton and Wheeling, 99 m.	18*	283 00	.....	18
3,362	91,389	374,751	328,897	10,963	r. p. o., (say) 50 by 9, f. f. c., a. l.	7	275 00	r. p. o., with platforms, &c., 54.5 by 9.9.	19
2,382	167,340	249,722	222,876	7,425	15 by 8.6, f. f. and m. c., a. l. ..	23	275 00	Main route; branch \$50, (509.)	20
7,786	220,120	357,906	158,896	5,296	r. p. o., 48 by 9.54, f. f. c., a. l. ..	7	275 00	.....	21
5,618	54,310	149,928	121,545	4,051	r. p. o., 48 by 9, f. f. c., a. l. ....	24	250 00	.....	22
4,191	162,683	456,874	231,032	7,701	r. p. o., 36 by —, 198 m., 50.8 by —, 278 m., f. f., a. l.	12	225 00	Main route; branches \$75, \$55, (272, 341.)	23
9,336	84,255	383,591	229,322	7,643	r. p. o., (say) 50 by 9, f. f. c., a. l.	204*	225 00	Main route; branches \$50, (456, 557;) r. p. o., with platforms, 58 by 9; weight in Nov., 1873; company report r. p. o., 55.6 by 9.6, f. f. c., from Mar. 30, 1874.	24

E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
25	Va. ....	4403	.....	Alexandria, Lynchburgh....	Washington City, Virginia Mid-land & Great Southern, (late Orange, Alexandria & Manassas.)	171	21
26	Ill ....	11405	23007	Chicago, Burlington.....	Chicago, Burlington and Quincy..	207.70	36
27	Tenn {	10001 } 10002 }	19002	Bristol, Chattanooga .....	East Tennessee, Virginia & Georgia	242.7	14
28	Va. ....	4414	.....	Lynchburgh, Bristol .....	Atlantic, Mississippi and Ohio ...	205	19
29	Ohio ..	9046	.....	Cleveland, Cincinnati .....	Cleveland, Columbus, Cincinnati and Indianapolis.	245.25	25
30	Ohio ..	9031	.....	Cincinnati, Xenia .....	Little Miami .....	65.96	25
31	Ohio ..	9031	.....	Cincinnati, Springfield.....	.....do .....	84.96	25
32	Ill ....	11404	23015	Chicago, Davenport.....	Chicago, Rock Island and Pacific	183	24
33	Mass .	601	601	Boston, Portsmouth.....	Eastern.....	56½	24
34	Ill ....	11403	23003	Chicago, Clinton .....	Chicago and Northwestern.....	139	24
35	Ill ...	11403	23003	Chicago, Council Bluffs .....	.....do .....	490	24
36	Ill ....	11403	23003	Clinton, Council Bluffs .....	.....do .....	351	24
37	Va. ....	4401	.....	Washington, Richmond . ...	Richmond, Fredericksburgh and Potomac.	131	30
38	Tenn .	10004	19004	Stevenson, Chattanooga.....	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	39	25
39	Minn .	13513	26013	Saint Paul, Winona.....	Chicago, Milwaukee & St. Paul, (late Milwaukee & St. Paul.)	103.54	25
40	Iowa..	11003	27005	Burlington, East Plattsburgh	Burlington and Missouri River...	279.14	21
41	Ill ....	11406	23017	Chicago, East Saint Louis ..	Chicago and Alton.....	283	30
42	Ohio ..	9017	.....	Columbus, Indianapolis .....	Columbus, Chicago and Indiana Central	182	25
43	Ohio ..	9018	.....	Galion, Indianapolis.....	Cleveland, Columbus, Cincinnati and Indianapolis.	204	25
44	La. ....	8002	.....	New Orleans, Canton .....	New Orleans, Jackson, and Great Northern.	206	15
45	Miss ..	7001	.....	Canton, Jackson .....	Southern Railroad Association ...	237	9
46	Mass .	608	608	Boston, Providence .....	Boston and Providence.....	44	24
47	Vt. ....	482	406	Rutland, Burlington .....	Central Vermont, (late Rutland and Burlington.)	67½	12
48	Vt. ....	482	406	Bellows Falls, Burlington...	.....do .....	119½	12
49	Me ...	114	124	Portland, Portsmouth.....	Eastern, (late Portland, Saco & Portsmouth.)	52	24
50	W. V	4102	.....	Grafton, Parkersburgh.....	Baltimore and Ohio .....	104	25
51	Mo ...	10505	23005	Quincy, Saint Joseph .....	Hannibal and Saint Joseph .....	203½	15
52	Mass..	604	604	Boston, Fitchburgh.....	Fitchburgh .....	52	30
53	Mo ...	10504	28004	Saint Louis, Moberly .....	Saint Louis, Kansas City and Northern, (late North Missouri.)	146½	21
54	Ill ....	11921	23035	Chicago, Milwaukee .....	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	22.55	25
55	Ky ...	9608	20005	Louisville, Nashville.....	Louisville and Nashville.....	126.6	25
56	Mich..	12506	24005	Detroit, Chicago .....	Michigan Central.....	225.25	15

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
186,830	62,243	249,073	211,786	7,059	r. p. o., 42.3 by —, f. f. c., a. l.	13	\$225 00	Main route; branch \$50, (624.)	25
264,714	86,234	350,948	207,509	6,916	r. p. o., (say) 50 by 9, f. f. c., a. l.	20½*	225 00	Main route; branches \$50, (456, 557,) r. p. o., with platforms, 58.6 by 9; in Oct., 1873.	26
163,010	65,229	228,239	196,454	6,548	r. p. o., 40.6 by 9.6, f. f., a. l.	14	225 00	Main route; branch \$100, (157.)	27
158,390	59,894	218,284	189,982	6,332	r. p. o., 40.5 by 9, f. f. c., a. l.	14	225 00		28
240,107	115,267	355,374	178,916	5,964	r. p. o., 39.2 by 9.2, f. f. c., a. l.	12	225 00		29
			175,706	5,856	15.6 by 8.6, f. f., a. l.	24	225 00	Part; res. \$100, (31)	30
32,592	117,901	200,493	135,097	4,503	.....do.....	24	225 00	19 miles at \$100, (30)	31
253,644	37,531	296,175	278,830	9,293	r. p. o., (say) 40 by 10, a. l. to Geneseo, 159 m., d. l. res., 24 m.	12	200 00	r. p. o., with platforms, 46.6 by 10.	32
194,990	116,293	311,283	260,091	8,669	r. p. o., 40 by 8.9, f. f., d. l.; r. a. apt., 22 by 9, f. f., ½ l.	30½*	200 00		33
204,502	47,364	251,866	233,811	7,793	r. p. o., (say) 50 by 10, f. f., a. l.	19½*	200 00	Part; res. \$200, (36,) r. p. o., with platforms, 56 by 10.	34
			203,150	6,771	.....do.....	18½*	200 00	r. p. o., with platforms, 56 by 10.	35
172,627	68,348	246,975	191,076	6,369	.....do.....	18	200 00	Part; res. \$200, (34,) r. p. o., with platforms, 56 by 10.	36
141,489	51,791	193,280	185,399	6,180	r. p. o., 43 by —, f. f. c., d. l.	13	200 00		37
			131,416	4,320	r. p. o., 23 by 9.10, f. f. c., a. l.; r. a. apt., 12.6 by 8.9, f. f., a. l.	12½*	200 00	Part; res. \$150, (91,) branch \$40, (655.)	38
39,778	96,956	136,734	117,724	3,925	r. p. o., (say) 40 by 10.3, f. f. c., a. l.	12	200 00	r. p. o., with platforms, 46 by 10.3.	39
124,184	48,712	172,896	113,081	3,769	r. p. o., 42 by 8.6, f. f. c., a. l.	12	200 00	In Nov., 1873; company report r. p. o. 50 by 9, f. f. c., from Apr. 6, 1874.	40
128,919	96,101	225,020	105,571	3,519	r. p. o., 32 by 10, f. f. c., and m. c.; a. l.; r. a. apt., 24 by 10, f. f. c., a. l. 28.8 m.	18½*	200 00	In May, 1874; 45 feet r. p. o. to be furnished.	41
75,178	49,433	124,611	88,968	2,965	12 by 9, f. f., a. l.	20	200 00		42
116,318	42,981	159,299	75,575	2,519	r. p. o., 39.2 by 9.2, f. f. c., a. l.	12	200 00		43
41,082	63,772	104,854	67,607	2,253	r. p. o., 46 by 9.10, f. f., a. l.	13	200 00		44
34,703	70,545	105,248	64,509	2,150	.....do.....	13	200 00		45
34,099	23,840	61,939	31,792	1,059	No apt.; no r. a.	20½*	200 00		46
			118,611	3,953	25 by 9.3, f. f., a. l.	15*	181 81	Part; residue \$100, (144.)	47
91,697	65,136	156,833	98,341	3,277	.....do.....	15*	180 81	52 miles at \$100, (144.)	48
93,322	150,866	244,188	230,825	7,683	r. p. o., 40 by 8.9, f. f., d. l.; r. a. apt., 22 by 9, f. f., ½ l.	24	175 72		49
197,271	99,001	296,272	272,900	9,096	r. p. o., 52.4 by 8.9, f. f., d. l.	14	175 00	In August, 1874.	50
172,318	82,676	254,994	180,623	6,020	r. p. o., 40 by 9.10, a. l.	13	175 00	Main route; branch \$175, (65.)	51
119,486	86,671	206,157	173,694	5,789	r. p. o., 25 by 8, 15 by 7, 12 by 7, 12 by 6.9, 11 by 6.6, (average, 15 by 7,) f. f., a. l.	18	175 00		52
			150,807	5,026	24 by 7.6, f. f., a. l., 2 agents 58 m.	19½*	175 00	Part; residue \$175, (64)	53
103,810	31,407	135,217	136,737	4,558	No r. a.	18	175 00		54
148,330	57,314	205,644	127,573	4,252	r. p. o., 31.6 by 9.3, f. f., a. l.; apt. in b. c., 14.10 by 7.6, in charge of baggage-master.	34½*	175 00		55
130,946	119,425	250,371	119,175	3,972	r. p. o., (say) 45 by 10.6, a. l.	33½*	175 00	r. p. o., with platforms, 51.8 by 10.6.	56

E.—Table showing the weight of the mails, the speed with which they

						Carry-	Length of route.	
							Miles.	Miles per hour
						and Mis-	371.75	48
58	Vt....	461	463	Windsor, Burlington.....	SOUTH Central Vermont, (late Vermont Central.)		119	34
59	Ohio..	9030		Cincinnati, Hamilton .....	Cincinnati, Hamilton and Dayton		96.53	36
60	Iowa..	11003	27005	Burlington, East Plattsmouth	Burlington and Missouri River .		279.14	23
61	Wis..	13001	25009	Chicago, Green Bay.....	Chicago and Northwestern .....		245	34
62	Ill....	11401	23001	Chicago, Milwaukee .....	do .....		87	24
63	Vt....	412	401	Burlington, Rouse's Point...	Central Vermont, (late Vermont Central & Vermont & Canada.)		55.50	12
64	Mo..	10504	28004	Moberly, Kansas City .....	St. Louis, Kansas City and North- ern, (late North Missouri.)		125	26
65	Mo..	10505	28005	Palmyra, Hannibal .....	Hannibal and Saint Joseph .....		15	22
66	Ala..	6612		Mobile, Montgomery.....	Mobile and Montgomery.....		179	17
67	Ill....	11417	23010	Galesburgh, Quincy .....	Chicago, Burlington and Quincy		100	22
68	Ind..	12003	22003	Indianapolis, Cincinnati ....	Indianapolis, Cincinnati and La Fayette.		113	2
69	Ind..	12023	22023	La Fayette, Kankakee.....	Cincinnati, La Fayette & Chicago		57.35	25
70	Ind....	13005	22005	Indianapolis, La Fayette ...	Indianapolis, Cincinnati and La Fayette.		65	2
71	Iowa..	11005	27014	Davenport, Missouri River	Chicago, Rock Island & Pacific		318	29
72	N. H..	251	251	Concord, Nashua.....	Concord .....		26	24
73	Mass..	702	646	Springfield, South Vernon Junction.	Connecticut River .....		50	2
74	Ky....	9607a	20004	Covington, Louisville .....	Louisville, Cincinnati and Lex- ington.		102	25
75	Mass..	603	603	Boston, Nashua .....	Boston and Lowell and Nashua and Lowell.		42	2
76	Wis..	13005	25002	Milwaukee, La Crosse .....	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)		190	22
77	Kans..	14001	33001	Kansas City, Cheyenne ....	Kansas Pacific .....		745	2
78	Ill....	11402	23002	Chicago, Freeport .....	Chicago and Northwestern.....		121	24
79	Mo..	10512	28011	Sedalia, Denison .....	Missouri, Kansas and Texas ..		447	22
80	Conn..	936	904	New Haven, New London ..	New York, New Haven and Hart- ford.		50	24
81	Pa....	2422		Sunbury, Williamsport.....	Pennsylvania.....		22.4	13
82	Mass..	602	602	Boston, South Berwick Junc- tion.	Boston and Maine.....		75	20
83	Ala....	6605		Memphis, Stevenson .....	Memphis and Charleston .....		271.30	9
84	Tenn..	10004	19004	Nashville, Chattanooga ....	Nashville, Chattanooga & Saint Louis, (late Nashville and Chat- tanooga.)		153	2
85	Ill....	11426	23023	Decatur, St. Louis .....	Toledo, Wabash and Western		112	22
86	Ky....	9611	20002	Bowling Green, Guthrie ...	Louisville and Nashville, (late Paducah and Gulf.)		51	2
87	Ohio..	9030		Hamilton, Dayton .....	Cincinnati, Hamilton and Dayton		33.92	3
88	Ohio..	9007		Cleveland, Wellsville .....	Cleveland and Pittsburgh.....		102.26	20
89	Mass..	602	602	Boston, Portland.....	Boston and Maine.....		112.19	2
90	Mo..	221	221	Memphis, Paris.....	Louisville and Nashville & Great Southern, (late Louisville and Nashville.)		132.50	2
	Tenn..	10010	19010					



are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
132,860	55,863	194,723	112,081	3,736	24 by 7.6, f. f., s. l., 2 agents 58 m.	19½*	\$175 00	.....	57
179,232	153,488	332,726	112,026	3,734	r. p. o., 24 by 9.7, 25 by 9.7, f. f. c., s. l. 93 m.; r. a. apt., 25 by 9.3, 13.7 by 9.7, f. f., s. l. residue, 26 m.	12½*	175 00	.....	58
79,579	37,999	117,878	110,048	3,669	12 by 8, f. f., d. l. ....	43*	175 00	Part; residue \$150, (87.)	59
109,395	52,845	162,240	103,376	3,445	r. p. o., 42 by 8.6, f. f. c., s. l.	12	175 00	Main route; branch \$50, (431.) In October, 1873.	60
143,752	67,352	211,104	98,919	3,297	r. p. o., (say) 50 by 10, f. f. c., s. l.	14½*	175 00	r. p. o., with platforms, 56 by 10.	61
84,291	40,579	124,870	97,923	3,263	r. p. o., 42.6 by 10, d. l. ....	24	175 00	.....	62
150,690	106,186	256,876	96,163	3,205	r. p. o., 24 by 9.7, 25 by 9.7, f. f. c., s. l. 24.50 m.; r. a. apt., 25 by 9.3, 13.7 by 9.7, f. f., s. l. residue, 31 m.	14½*	175 00	.....	63
.....	.....	.....	68,728	2,290	24 by 7.6, f. f., s. l. ....	19	175 00	Part; residue \$175, (53.)	64
2,612	13,457	16,069	15,955	532	b. c.; no r. a. ....	19	175 00	Branch: main route \$175, (51.)	65
40,359	32,770	79,129	68,872	2,298	10.3 by 8.8½, f. f., s. l. ....	7	160 00	.....	66
59,295	24,561	87,856	67,542	2,250	r. p. o., (say) 50 by 9, f. f. c., s. l.	18	160 00	r. p. o., with platforms, 58.6 by 9.	67
72,415	167,822	246,237	217,246	7,241	r. p. o., 50 by —, f. f. c., s. l.; r. a. apt., 12 by 7.5, f. f., s. l.	19	150 00	.....	68
124,019	86,703	210,722	204,191	6,806	r. p. o., 50 by 10, f. f. c., s. l.; r. a. apt., 10 by 8, 8 by 8, f. f., s. l.	13	150 00	.....	69
139,063	82,720	221,783	203,934	6,797	r. p. o., 50 by —, f. f. c., s. l.; r. a. apt., 12 by 7.5, f. f., s. l.	19	150 00	.....	70
215,984	74,596	290,580	198,455	6,614	r. p. o., (say) 40 by 10, d. l. to Iowa City, 54 m., s. l. residue, 264 m.	12	150 00	r. p. o., with platforms, 46.6 by 10.	71
93,191	129,154	222,345	174,490	5,816	r. p. o., 22.3½ by 6.11, f. f., s. l.; r. a. apt., 17 by 7, 12 by 6.8, f. f., d. l. 18 m.	33*	150 00	.....	72
103,436	91,444	194,880	164,988	5,439	r. p. o., 23.4 by 6.5, 20.9 by 6.9½, f. f., d. l.	16½*	150 00	.....	73
137,547	69,201	206,748	164,281	5,476	10 by 7.3, f. f., s. l. ....	20	150 00	.....	74
110,275	73,594	183,869	162,795	5,426	22 by 9.6, f. f. and m. c., s. l.	18	150 00	.....	75
47,774	53,310	201,084	157,766	5,257	r. p. o., (say) 40 by 10.3, s. l.	12	150 00	r. p. o., with platforms, 46 by 10.3.	76
23,956	135,611	369,567	133,719	4,457	44 3 by 10.6, f. f., s. l. ....	9½*	150 00	Main route; branch \$25, (205.)	77
98,835	45,740	154,635	129,309	4,309	r. p. o., 43.4 by 10, s. l. ....	12	150 00	.....	78
15,965	43,775	164,740	120,896	4,029	r. p. o., 51.2 by 9.10, f. f., s. l.	7	150 00	In June, 1874	79
81,424	41,782	123,206	111,485	3,716	12.6 by 6.9, f. f. c. and m. c., s. l., and r. a. in b. c.	28	150 00	do	80
.....	.....	.....	82,773	2,759	r. p. o., 40 by 9.6, 45 by 9.6, f. f. c., s. l.; r. a. apt. 8.10 by 5.7, f. f., d. l.	18	150 00	Part; residue \$100, (161.)	81
.....	.....	.....	82,098	2,736	13 by 6.10, f. f., d. l. ....	12	150 00	Main route; branch \$50, (452.)	82
57,906	93,611	131,517	78,868	2,629	r. p. o., 23 by 9.10, f. f. c., s. l.	14	150 00	Main route; branches \$50, \$30.	83
12,428	89,220	151,648	75,768	2,525	12 6 by 8.9, f. f., s. l. ....	10½*	150 00	Main route; branch \$40, (655;) 39 miles at \$200.	84
8,970	22,776	87,746	75,560	2,518	12 by —, f. f., s. l. ....	12	150 00	.....	85
9,162	16,892	76,060	71,982	2,399	14.10 by 7.6, f. f., s. l. ....	19	150 00	.....	86
2,513	27,243	69,758	65,328	2,178	12 by 8, f. f., s. l. ....	28*	150 00	Part; residue \$175, (59.)	87
6,207	58,961	125,168	64,216	2,140	13 by 9, f. f., s. l. ....	15*	150 00	.....	88
2,425	85,061	197,546	61,216	2,040	13 by 6.10, f. f., d. l. ....	12	150 00	Pay fixed only on the 75 miles next to Boston.	89
3,984	64,553	98,517	56,787	1,892	13.6 by 7.6, f. f., s. l. ....	13	150 00		90

E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
91	Tenn	10004	19004	Nashville, Stevenson.....	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	114	25
92	Ind ...	12007	22007	New Albany, Indianapolis ..	Jeffersonville, Madison and Indianapolis.	114	27
93	Wis ..	13004	25001	Milwaukee, North McGregor	Chicago, Milwaukee and Saint Paul, (late Milwaukee & Saint Paul.)	197.50	25
94	Ind ...	12004	22004	Indianapolis, Kokomo .....	Indianapolis, Peru and Chicago..	54	20
95	La ....	8001	.....	New Orleans, Brashear City	Morgan's Louisiana and Texas...	83	21
96	Ind ...	12004	22004	Indianapolis, Peru.....	Indianapolis, Peru and Chicago..	72	20
97	Mass..	677	641	Taunton, Mansfield Junction	New Bedford, (late Taunton Branch.)	12	33
98	Minn	13504	26009	Minneapolis, North McGregor.	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	215.70	25
99	Cal ...	14707	46006	Sacramento, San Francisco..	California Pacific .....	83	20
100	Ind ...	12009	22009	Richmond, Chicago .....	Pittsburgh, Cincinnati and Saint Louis.	225.4	20
101	Vt.....	487	407	Brattleborough, Bellows Falls.	Central Vermont, (late Vermont Valley.)	24	25
102	Vt.....	481	405	Bellows Falls, Windsor .....	Central Vermont, (late Sullivan).	25	25
103	N. H..	254	253	Concord, White River Junction.	Northern .....	69	27
104	Mo ...	10506	28006	Kansas City, Council Bluffs	Kansas City, Saint Joseph and Council Bluffs.	203	21
105	Mo ...	10510	23010	Kansas City, Cameron .....	Hannibal and Saint Joseph .....	54	22
106	Me ...	9	2	Portland, Bangor .....	Maine Central .....	122.25	24
107	Me ...	181	9	Bangor, New Brunswick....	Consolidated European and North American.	114.4	24
108	N. Y..	1027	1213	Syracuse, Rochester .....	New York Central and Hudson River.	104	27
109	Mass ..	609	609	Boston, Plymouth.....	Old Colony and Newport .....	36	31
110	Ohio ..	9027	.....	Dayton, Toledo .....	Dayton and Michigan .....	142.95	20
111	Me ...	116	6	Portland, South Paris.....	Grand Trunk .....	46	25
112	R. I. ...	802	802	Providence, New London ...	Stonington and Providence .....	63.7	25
113	Va.....	4407	.....	Richmond, Greensborough ..	Richmond and Danville .....	190.4	15
114	N. C. ...	5004	.....	Charlotte, Greensborough...	.....do .....	93	15
115	Pa.....	2402	.....	Philadelphia, Pottsville .....	Philadelphia and Reading .....	92.5	22.5
116	N. Y..	1017	1259	Troy, North Adams .....	Troy and Boston.....	50	25
117	Ohio ..	9015	.....	Columbus, Delaware.....	Cleveland, Columbus, Cincinnati and Indianapolis.	24.75	25
118	S. C. ...	5606	.....	Charleston, Savannah.....	Savannah and Charleston .....	104	15
119	Ga ...	6003	.....	Atlanta, West Point.....	Atlanta and West Point .....	86.4	20
120	Ala....	6601	.....	Montgomery, West Point...	Western, of Alabama .....	88.50	13
121	Ohio ..	9003	.....	Rochester, Bellaire .....	Cleveland and Pittsburgh .....	62.4	20
122	Ga ...	6004	.....	Millen, Augusta .....	Central Railroad and Banking Co.	53.4	17.5
123	S. C. ...	5605	.....	Kingsville, Augusta .....	South Carolina.....	119	15
124	N. Y..	1017	1259	Hoosac Junction, State Line.	Troy and Boston .....	5.4	25
125	Mass ..	639	645	Fitchburgh, Bellows Falls ..	Cheshire and Ashuelot .....	64	25
126	N. Y..	1023	1258	Rouse's Point, Canada Line.	Champlain and Saint Lawrence ..	2.4	25
127	Ill ....	11407	23020	Chicago, Cairo .....	Illinois Central .....	365	12
128	N. Y..	1026	1227	Rome, Ogdensburgh .....	Rome, Watertown and Ogdensburgh.	142	25
129	N. Y..	1026	1227	De Kalb Junction, Potsdam Junction.	.....do .....	25	25
130	N. Y..	1338a	1250	Fredonia, Dunkirk.....	Dunkirk and Fredonia .....	3.4	1
131	Me ...	115	5	Portland, Augusta .....	Maine Central, (late Portland and Kennebeck.)	64	25

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
			56,170	1,872	12.6 by 8.9, f. f., a. l. ....	9*	\$150 00	Part; residue \$200, (38;) branch \$40, (655.)	91
25,950	42,583	68,533	50,148	1,671	13 by 7.4, f. f., a. l. ....	18	150 00		92
61,352	33,718	95,070	46,255	1,541	23 by 10, f. f., a. l. ....	12	150 00		93
			33,965	1,132	12 by 8, f. f., a. l. ....	18	150 00	Part; residue \$75, (252.)	94
20,062	14,701	34,763	31,214	1,040	14.7 by 6.5, f. f., a. l. ....	6	150 00		95
20,810	23,088	43,898	29,607	986	12 by 8, f. f., a. l. ....	18	150 00	24 miles at \$75.	96
13,163	15,716	28,879	28,090	936	No apt.; no r. a. ....	36½	150 00		97
44,300	43,617	87,917	25,647	854	27 by 10.3, f. f., a. l. ....	6½*	150 00		98
17,736	18,224	35,960	24,870	829	10 by 8.10, f. f., a. l. ....	7	150 00	Main route; branch \$75, (284)	99
20,252	21,533	41,791	15,873	529	12 by 8.6, f. f., a. l. ....	6	150 00		100
77,325	69,264	146,650	144,256	4,808	22.6 by 9.3, f. f., d. l. ....	12	140 00		101
83,554	68,702	152,262	143,164	4,772	22.6 by 9.3, f. f., d. l. ....	12	140 00		102
78,292	56,593	135,485	117,906	3,930	r. p. o., 22.3½ by 6.11, f. f., a. l. ....	18	140 00	Main route; branch \$50, (522.)	103
55,000	37,849	92,849	46,832	1,561	r. p. o., 24.10½ by 9.1½, 22.9 by 8.8, f. f. o., a. l. ....	12	140 00	Main route; branch \$50, (413.)	104
120,340	54,113	174,453	168,537	5,618	r. p. o., 40 by 9.10, a. l. ....	13	125 00		105
120,275	73,647	193,922	108,767	3,625	16 by —, f. f., a. l. to Water-ville, 55 m.; r. p. o., 42 by 9, f. f., d. l. res., 55 m. ....	9*	125 00		106
74,203	46,804	121,007	103,765	3,458	18 by 7, f. f., a. l. ....	9*	125 00		107
76,301	72,139	148,440	65,018	2,167	14.6 by 8.6, f. f. c., & b. c., a. l. ....	21½	125 00		108
102,836	71,322	180,152	60,983	2,032	12.6 by 9, f. f. & m. c., d. l. ....	23½*	125 00		109
52,832	38,202	97,040	59,032	1,987	12 by 8, f. f., a. l. ....	18	125 00		110
			115,131	1,918	23 by 8, f. f., a. l. ....	12	125 00	Part; residue \$100, (149,) 60 days, in October, 1873, and February, 1874.	111
25,707	49,587	75,294	56,997	1,899	11 by 6, f. f., a. l. ....	22½*	125 00		112
55,652	18,955	74,613	51,772	1,725	18.4 by 8.6, f. f., a. l. ....	16*	125 00		113
			45,590	1,519	21 by 8, f. f., a. l. ....	14	125 00	Part; residue \$82.11, (213.)	114
55,702	38,131	93,839	45,076	1,502	15 by 8.8, 11.6 by 8.2, f. f., a. l. ....	14½*	125 00		115
52,249	33,242	85,491	42,616	1,420	15.2 by 6.8, f. f., a. l. ....	20½*	125 00	Main route; branch \$125, (124.)	116
29,015	16,097	45,112	42,256	1,403	b. c.; no r. a. ....	12	125 00		117
30,371	12,575	42,946	26,896	1,229	8 by 6, f. f., a. l. ....	13	125 00	In April, 1874. ....	118
28,312	11,753	40,065	34,264	1,142	12.6 by 8.9, fixtures, a. l. ....	7	125 00		119
17,312	29,617	46,935	33,751	1,125	18.4 by 8.8, f. f., a. l. ....	7	125 00		120
25,293	30,486	66,379	29,528	984	13 by 9, f. f., a. l. ....	18	125 00		121
2,830	10,775	19,605	17,498	583	8.2 by 7, f. f., a. l. ....	14	125 00		122
3,346	10,417	23,763	8,220	274	16.2 by 8.2, f. f., a. l. ....	13	125 00	Main route; branches \$75, (265,) \$60, (322,) \$50, (576.)	123
4,941	1,586	6,527	5,979	199	No r. a. ....	6	125 00	Branch; main route \$125, (116.)	124
6,321	38,876	95,197	81,643	2,721	24 by 8.8, fixtures, a. l. ....	18	117 18		125
967	430	1,397	1,397	47	b. c.; no r. a. ....	6	116 66		126
0,027	150,150	299,177	88,231	2,940	r. p. o., 50 by 10, 26.8 by 9, f. f., d. l. to Kankakee, 55 m., a. l. res., 3.10 m. ....	12	115 35		127
0,002	40,463	110,470	52,826	1,760	23 by 9, 23.6 by 7, fixtures, a. l. ....	15	115 00	Main route; branch \$115, (129.)	128
1,571	7,811	19,382	10,907	363	No r. a. ....	12	115 00	Branch; main route \$115, (128.)	129
3,322	4,346	7,668	7,668	255	No apt.; street car ....	27*	114 28		130
0,427	74,911	185,338	122,029	4,087	r. p. o., 42 by 9, f. f. c., a. l.; r. a. apt., 16 by —, f. f. c., a. l. ....	12	113 35	Main route; branch \$113.35, (132.)	131

E.—Table showing the weight of mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route. Miles.	Miles per hour.
132	Me ...	115	5	Brunswick, Bath.....	Maine Central, (late Portland and Kennebeck.)	9	22
133	Ala ...	6613	.....	Mobile, New Orleans.....	New Orleans, Mobile, and Texas.	140	40
134	Ohio ..	9029	.....	Hamilton, Richmond.....	Cincinnati, Hamilton and Dayton	45.1	30
135	Me ...	221	221	Salmon Falls, Portland.....	Boston and Maine.....	44.18	30
136	Ga ...	6009	.....	Savannah, Macon.....	Central Railroad and Banking Co.	192½	21
137	Del ...	3401	.....	Wilmington, Delmar.....	Philadelphia, Wilmington and Baltimore.	96.92	22
138	N. J ..	2105	.....	Philadelphia, New York ....	Pennsylvania.....	93	30
139	N. J ..	2105	.....	Bordentown, Trenton .....	.....do .....	6	30
140	Mass ..	690	744	Miller's Falls, Brattleborough	Central Vermont, (late Vermont and Massachusetts.)	21	21
141	Vt ....	452	402	White River Junction, Derby Line.	Connecticut and Passumpsic Rivers and Massawippi Valley, (late Connecticut & Passumpsic Rivers.)	114.17	25
142	Mass ..	690	646	Fitchburgh, Hoosac Tunnel.	Vermont and Massachusetts .....	87	21
143	Mich ..	12502	24001	Toledo, Detroit .....	Lake Shore & Michigan Southern	64.52	22
144	Vt ...	482	406	Bellows Falls, Rutland.....	Central Vermont, (late Rutland and Burlington.)	52	22½
145	Tenn ..	10009	19009	Guthrie, Paris .....	Memphis, Clarksville and Louisville.	82½	22
146	Mass ..	663	637	Middleborough, Hyannis....	Cape Cod .....	47	30
147	Mass ..	627	622	Lawrence, Manchester.....	Manchester and Lawrence .....	28	25
148	Me ...	116	6	Portland, Canada Line.....	Grand Trunk .....	165	21
149	Me ...	116	6	South Paris, Canada Line...	.....do .....	117	21
150	N. H. ..	253	252	Concord, Wells River .....	Boston, Concord and Montreal ..	93	22
151	Ill ....	11418	23021	Dubuque, Centralia.....	Illinois Central .....	344	12½
152	Conn ..	926	902	New London, Willimantic ..	Central Vermont, (late Vermont Central.)	30	12½
153	Md ...	3514	.....	Baltimore, Washington.....	Baltimore and Potomac.....	426	22
154	Vt ....	1582	525	Ticonderoga, Leicester Junction.	Central Vermont, (late Vermont Central and Vermont and Canada.)	144	12
155	Ala ...	6604	.....	Montgomery, Calera.....	South and North Alabama.....	63.6	22
156	Pa ....	2422	.....	Sanbury, Erie.....	Pennsylvania .....	287.6	22
157	Tenn ..	10002	19002	Cleveland, Dalton.....	East Tennessee, Virginia and Georgia.	22½	14
158	N. J ..	2110	.....	Philadelphia, Bridgeton.....	West Jersey .....	32.40	22
159	Ill ....	11416	23018	Bloomington, Godfrey .....	Chicago and Alton.....	132	24
160	Pa ....	2404	.....	Philadelphia, Bethlehem....	North Pennsylvania .....	54.6	22
161	Pa ....	2422	.....	Williamsport, Erie.....	Pennsylvania .....	97.3	22
162	Mass ..	670	638	Yarmouthport, Wellfleet....	Cape Cod .....	31	22
163	Iowa ..	11007	27021	Dubuque, Sioux City.....	Illinois Central .....	327.12	22
164	Mass ..	683	643	Worcester, Nashua .....	Worcester and Nashua .....	46.25	22½
165	Mich ..	12507	24006	Detroit, Grand Haven .....	Detroit and Milwaukee.....	190	22
166	Pa ....	2410	.....	Allentown, Waverly.....	Lehigh Valley .....	122.5	22
167	Mo ...	10502	28002	Saint Louis, Columbus.....	Saint Louis and Iron Mountain and Cairo and Fulton.	197	22
168	Miss ..	7003	.....	Vicksburgh, Jackson .....	Vicksburgh and Meridian.....	43.3	24
169	Ill ....	11422	23030	East Saint Louis, Du Quoin.	Saint Louis, Alton and Terre Haute.	71.20	22½

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
20,665	11,725	32,393	32,393	1,079	12 by —, t. l. ....	18	\$113 35	Branch; main route \$113.35, (131.)	132
22,796	30,348	53,144	48,006	1,600	17 by 7, f. f., a. l.; (space in through mail-car 18 by 5.)	14	110 00		133
33,951	11,494	45,445	40,910	1,363	12 by 8, f. f., a. l. ....	12	110 00		134
21,721	17,287	39,008	30,523	1,017	13 by 6.10, f. f., d. l. ....	12	110 00		135
23,754	25,903	49,657	18,135	604	8.2 by 7, f. f., a. l. ....	14	110 00		136
41,269	22,209	63,478	33,009	1,100	24 by 9, f. f., d. l. ....	12	109 59		137
16,286	12,683	28,974	9,836	327	8 by 6.6, fixtures, a. l. ....	8½	103 00	Main route; branch \$103, (139.)	138
1,168	1,791	2,959	2,959	98	.....do. ....	12	103 00	Branch; main route \$103, (138.)	139
99,360	95,384	194,744	111,366	3,712	15 by 7, f. f., d. l. ....	18	160 00		140
64,114	51,106	115,220	84,294	2,809	r. p. o., 23 by 9, f. f., a. l. ....	12	100 00		141
95,672	90,111	185,783	80,854	2,684	15 by 7, f. f., d. l., 69 m., a. l., res. 18 m.	16½	100 00	Main route; branch \$100, (189.)	142
91,259	32,533	124,392	74,327	2,477	13 by 9, f. f., a. l. ....	6	100 00		143
.....	.....	.....	72,718	2,423	25 by 9.3, f. f., a. l. ....	15*	100 00	Part; residue \$180.81, (47.)	144
57,277	15,620	72,897	67,139	2,237	13.7 by 7.10, f. f., a. l. ....	13	100 00		145
56,090	37,246	93,336	66,472	2,215	12.6 by 9, f. f. & m. o., a. l. to Yarmouth Junction, 41.24 m.; no r. a. residue.	12	100 00		146
41,308	31,858	73,166	66,394	2,213	17 by 7, 12 by 6.8, f. f., d. l. ....	18	100 00		147
94,593	76,417	171,010	106,422	1,773	23 by 8, f. f., a. l. ....	10½*	100 00	48 miles at \$125; weight for 60 days, in October, 1873, and February, 1874.	148
.....	.....	.....	102,753	1,712	.....do. ....	7½*	100 00	Part; residue \$125, (111;) 60 days, in Oct., 1873, and Feb., 1874.	149
41,512	31,036	72,548	47,051	1,563	17 by 6.8, f. f., a. l. ....	13½*	100 00		150
81,081	120,685	201,766	46,871	1,562	r. p. o., 28.1 by 9.6, f. f., a. l. ....	12	100 00		151
.....	.....	.....	45,567	1,518	11.5 by 5.8, f. f., a. l. ....	18	100 00	Part; residue \$75, (229)	152
.....	.....	.....	43,233	1,440	14.6 by 8.6, f. f., a. l. ....	6	100 00		153
21,015	23,126	44,141	42,341	1,411	14 by 9.3, f. f., a. l. ....	6	100 00	Formerly in New York section.	154
.....	.....	.....	40,569	1,352	14.10 by 7.6, f. f., a. l. ....	12	100 00	Part, residue \$75, (260)	155
95,377	62,206	166,583	37,233	1,241	8.10 by 5.7, f. f., d. l. 64.9 m., a. l. 157.2 m., t. l. 65½ m., r. p. o. 39.8 m.	18*	100 00	39.8 miles at \$150, (81)	156
27,075	11,200	38,275	37,165	1,238	22 by 8.4, f. f., a. l. ....	7	100 00	Branch; main route \$225, (27.)	157
37,916	27,648	65,564	36,191	1,206	10.10 by 6 5, 10.8 by 6.5, f. f., a. l. ....	12	100 00		158
52,282	50,201	102,483	36,170	1,205	r. p. o., 32 by 10, f. f. c. and m. c., a. l. 111.4 m.; r. a. apt., 24 by 10, f. f. o., a. l. residue, 40.6 m.	12	100 00	In May, 1874	159
31,595	22,020	53,615	35,892	1,196	10.6 by 6.6, f. f., a. l. ....	45½*	100 00	Main route; branch \$75, (230.)	160
.....	.....	.....	29,643	1,188	8.10 by 5 7, f. f., d. l. 25.1 miles, a. l., 157.2 m., t. l. 65½ miles.	17*	100 00	Part; residue \$150, (81)	161
25,842	19,853	46,695	35,151	1,172	12.6 by 9, f. f., d. l. ....	12	100 00		162
12,018	57,126	119,164	34,682	1,156	19.1½ by 9.2, f. f., a. l. ....	12	100 00		163
12,443	25,717	58,160	34,262	1,142	12.4 by 6.6, f. f., a. l. ....	18	100 00		164
13,753	29,395	83,248	34,079	1,135	18 by 9, fixtures, a. l. ....	15*	100 00		165
18,871	49,418	118,289	33,011	1,100	22 by 8.6, f. f., 24 l. 29½ m., d. l. 55 m., a. l., res.	10*	100 00		166
12,928	21,726	64,654	32,620	1,087	19.6 by 9, 14 by 8.10, a. l. ....	13	100 00	Main route; branches \$50, (374, 613.)	167
.....	.....	.....	32,133	1,071	12.6 by 7.1, f. f., a. l. ....	6	100 00	Part; residue \$75, (276)	168
7,794	15,503	43,297	29,493	984	20 by 7.6, f. f., a. l. ....	14½*	100 00		169

E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
170	Ky ...	9606	20002	Covington, Nicholasville....	Kentucky Central....	112	25
171	N. Y..	1013	1245	Albany, Binghamton.....	Delaware and Hudson Canal Com- pany.	142	12
172	Ark ...	7501	.....	Memphis, Argenta.....	Memphis and Little Rock.....	134	15
173	Ohio ...	9006	.....	Cleveland, Leavittsburgh...	Atlantic and Great Western. ...	49.7	2
174	N. Y..	1006	1233	New York, Greenport.....	Long Island .....	100½	12½
175	Ky ...	9607	20003	La Grange, Lexington .....	Louisville, Cincinnati and Lex- ington.	67	25
176	Vt....	508	408	Saint Albans, Canada Line..	Central Vermont, (late Vermont and Canada.)	17	2½
177	Va....	4406	.....	Richmond, Hinton.....	Chesapeake and Ohio .....	272 5/8	2
178	N. J..	2111	.....	Glassborough, Millville.....	West Jersey .....	32	5
179	Mich ..	12508	24007	Detroit, Port Huron .....	Grand Trunk .....	64½	5
180	Ohio ..	9006	.....	Cleveland, Sharon .....	Atlantic and Great Western.....	21.3	2
181	Cal ...	14702	46002	San Francisco, Salina.....	Southern Pacific.....	115	5
182	Conn ..	955	911	Waterbury, Providence.....	Hartford, Providence and Fishkill	124½	12
183	Kans ..	14143	33007	Atchison, Sargent.....	Atchison, Topeka and Santa Fé..	479½	5
184	Wis ..	13013	25010	Caledonia, Elroy .....	Chicago and Northwestern.....	135.45	24
185	Kans ..	14143	33007	Newton, Wichita .....	Atchison, Topeka and Santa Fé..	26	1-
186	Mass ..	654	634	South Braintree Junction, Newport.	Old Colony and Newport.....	61.75	25
187	Me ...	84	4	Calais, Princeton.....	Saint Croix and Penobscot .....	21	2
188	Ohio ..	9031	.....	Xenia, Springfield .....	Little Miami.....	19	1½
189	Mass ..	690	646	Greenfield, Turner's Falls...	Vermont and Massachusetts .....	5	2½
190	Cal ...	14702	46002	Gilroy, Hollister.....	Southern Pacific.....	14	2½
191	Pa....	2406	.....	Philadelphia, Darby .....	Philadelphia and Darby .....	5	2
192	Ind ...	12017	22017	Indianapolis, Peoria .....	Indianapolis, Bloomington and Western.	212 2/3	2
193	N. Y..	1022	1242	Rouse's Point, Ogdensburg	Central Vermont, (late Ogdens- burgh and Lake Champlain )	119	2 1/2
194	Tenn ..	10068	19008	Nashville, Guthrie.....	Saint Louis and Southeastern. Consolidated, (late Edgefield and Kentucky.)	48	2
195	Ill ...	11900	23032	East Saint Louis, Evansville	Saint Louis and Southwestern. Consolidated, (late Saint Louis and Southeastern.)	164½	2½
196	Mass ..	607	607	Boston, Southbridge .....	Boston, Hartford and Erie .....	70	2½
197	N. Y..	1028	1257	Syracuse, Binghamton.....	Syracuse, Binghamton and New York.	20	2
198	Ill ...	11429	23005	Sterling, Alton Junction....	Rockford, Rock Island and Saint Louis.	270	2½
199	N. Y..	1040	1230	Owego, Ithaca .....	Delaware, Lackawanna and Western.	25	2½
200	N. Y..	1005	1260	Stapleton, Tottenville .....	Staten Island .....	21	1½
201	Conn ..	945	910	South Norwalk, Danbury...	Danbury and Norwalk .....	13½	1½
202	Pa....	2442	.....	Pittsburgh, Oil City .....	Allegheny Valley.....	132.75	2
203	Ind ...	12012	22012	Evansville, Terre Haute....	Evansville and Crawfordsville...	110	2½
204	Ohio ..	9012	.....	Xenia, Dayton.....	Pittsburgh, Cincinnati and Saint Louis.	17	2½
205	Kans ..	14001	33001	Leavenworth, Lawrence....	Kansas Pacific.....	31	2½
206	Me ...	204	13	Bath, Rockland.....	Knox and Lincoln .....	49	2½
207	Mass ..	678	642	Taunton, New Bedford.....	New Bedford, (late New Bedford and Taunton.)	20½	2½
208	Conn ..	942	908	Bridgeport, Winsted .....	Naugatuck .....	62	2½
209	Mich ..	12950	24031	Fort Howard, Eaconawba...	Chicago and Northwestern .....	114 1/2	2
210	Pa....	2425	.....	Oil City, Corry .....	Oil Creek and Allegheny River and Buffalo, Corry and Pitts- burgh, (late Allegheny Valley.)	44	2
211	N. J..	2254	.....	New York, Middletown.....	New Jersey Midland .....	28	2½
212	N. C ..	5004	.....	Charlotte, Goldsborough....	Richmond and Danville.....	22½	2½
213	N. C ..	5004	.....	Greensborough, Goldsbor- ough.	.....do .....	130	2½



are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Remarks.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
30,007	20,884	50,891	29,535	984	12 by 8, f. f., d. l. 99 m., s. l. res.	11½*	\$100 00		170
42,563	28,263	70,826	28,135	937	15 by 8, fixtures and m. c., s. l.	18	100 00		171
24,203	9,241	33,444	27,938	931	10.4 by 8.2, 9.4 by 6.4, f. f., s. l.	6	100 00		172
			27,780	926	12.6 by 8, f. f., s. l.	15*	100 00	Part; residue \$60, (330).	173
37,310	20,724	58,034	25,579	852	10 by 8, 10.4 by 8.3, f. f., s. l.	9*	100 00		174
20,757	18,490	39,247	25,510	850	10 by 7.3, f. f., s. l.	12	100 00		175
17,352	7,102	24,454	24,454	815	17 by 9.3, f. f., s. l.	6	100 00		176
45,313	25,359	70,672	24,311	810	20.7 by 6.10, f. f., s. l.	12	100 00		177
15,142	11,513	26,655	22,555	751	8 by 6.4, f. f., s. l.	12	100 00	Speed 22 miles per hour in winter.	178
1-, 526	6,992	25,518	19,990	666	22 by 7.2, f. f. c., s. l.	12	100 00		179
20,422	14,074	40,556	19,130	637	12.6 by 8, f. f., s. l.	12½*	100 00	31.61 miles at \$60.	180
24,172	11,643	35,815	18,407	613	11 by 9, 11.6 by 9, f. f., s. l.	7	100 00	Main route; branch \$100, (190.)	181
42,598	37,463	80,061	18,366	612	14.2 by 6.6, f. f., s. l.	22½*	100 00		182
41,178	24,747	65,925	17,056	568	14 by 9, 10 by 7, 11 by 7, f. f., s. l.	6	100 00	119 miles at \$50; main route; branch \$100, (185.)	183
22,076	13,416	35,492	17,057	568	42.6 by 10, f. f. c., s. l.	6	100 00		184
9,632	6,813	16,495	12,994	432	14 by 9, 11 by 7, 10 by 7, f. f., s. l.	6	100 00	Branch; main route \$100 and \$50, (183.)	185
16,354	12,285	28,639	8,160	272	b. c.; no r. a.	12	100 00		186
2,041	2,976	5,017	4,522	150	10 by 7, f. f.; no r. a.	6	100 00		187
			3,120	104	15.6 by 8.6, f. f., s. l.	24	100 00	Part; residue \$225, (30).	188
1,451	1,158	2,609	2,428	81	No r. a.	12	100 00	Branch; main route \$100, (142.)	189
1,469	663	2,132	2,132	71	No r. a.	7	100 00	Branch; main route \$100, (181.)	190
603	282	885	885	29			100 00	Street railway.	191
51,943	41,126	93,069	53,127	1,770	r. p. o., (say) 50 by 10, f. f. c. and m. c., s. l.	12	90 00	Railway post-office, with platforms, 56 by 10.	192
40,942	33,958	74,900	48,723	1,624	13.8 by 7.3, f. f., s. l.	9	90 00		193
18,028	26,180	44,208	38,762	1,292	12 by 6.6, f. f., s. l.	6	90 00	Trips 6 at weighing, usually 12.	194
15,665	26,156	71,824	36,352	1,211	.....do .....	12	90 00	Main route; branch \$40, (656.)	195
6,723	22,587	49,310	20,089	969	12.10 by 6.10, 12.7 by 6.10, f. f., d. l.	12	90 00		196
3,626	17,370	40,996	20,423	680	20 by 7.6, f. f., s. l.	12	90 00		197
1,234	33,070	64,304	18,110	604	10.11 by 9.4, f. f., s. l.	10½*	90 00		198
3,987	7,395	21,382	18,036	601	8 by 7.8, f. f., s. l.	12	85 71		199
2,973	2,182	5,155	5,155	171	No apt; no r. a.	12	85 71		200
1,911	17,732	39,643	30,206	1,007	10 by 6, f. f., d. l.	24½*	85 11	Main route; branches \$50, (489,) \$30, (709.)	201
1,583	30,092	70,681	32,676	1,089	14.8 by 8.8, f. f., s. l.	18	85 00		202
1,265	30,735	50,003	29,061	968	12.6 by 8, f. f., s. l.	12	85 00		203
2,078	15,252	27,331	26,536	884	15.6 by 8.6, f. f., s. l.	24	85 00		204
1,904	11,896	27,802	24,811	827	44.3 by 10.6, f. f., s. l.	13	85 00	Branch; main route \$150, (77.)	205
1,137	13,227	34,364	24,318	810	14.6 by 7.2, 13 by 6.8, f. f., d. l.	12	85 00		206
1,112	12,081	26,193	23,417	801	Locked room in b. c.; no r. a.	27*	85 00		207
313	16,358	45,671	22,891	762	10.6 by 6.6, f. f., s. l.	12	85 00	Main route; branch \$75, (283.)	208
879	16,902	47,861	22,552	751	18 by 10, f. f., s. l.	6	85 00		209
			16,301	543	8 by 7, f. f., s. l.	12	85 00	Part; residue \$55, (349.)	210
311	12,147	30,458	19,774	659	18 by 7, f. f., s. l.	6	83 00		211
297	50,669	71,266	27,804	926	21 by 8, f. f., s. l.	9½*	82 11	93 miles at \$125	212
			15,081	502	.....do .....	7	82 11	Part; residue \$125, (114.)	213

E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						<i>Miles.</i>	
214	Ohio...	9038	.....	Salamanca, Dayton .....	Atlantic and Great Western.....	389.55	35
215	Conn...	943	909	Bridgeport, Pittsfield .....	Housatonic .....	110	12
216	Mich...	12521	24021	New Buffalo, Pentwater ....	Chicago and Michigan Lake Shore.	165.5	20
217	Pa.....	2419	.....	Binghamton, New Hampton.	Delaware, Lackawanna and Western.	144.50	35
218	Tex...	8506	.....	Dallas, Shreveport.....	Texas and Pacific.....	189.2	15
219	Iowa...	11002	27011	Keokuk, Burlington .....	Chicago, Burlington and Quincy	42.75	21
220	Ill....	11410	23052	Cortland, Sycamore .....	Sycamore and Cortland .....	5	12
221	Conn...	943	909	Van Deusenville, State Line.	Housatonic .....	11	15
222	Conn...	943	909	Danbury, Brookfield Junct'n.	.....do .....	54	18
223	Ohio...	12501½	9049	Toledo, Elkhart .....	Lake Shore and Michigan Southern.	133.60	12
224	Conn...	938	906	New Haven, Williamsburgh.	New Haven and Northampton ...	83	17
225	Cal'...	14703	46003	Roseville Junction, Tehama.	California and Oregon .....	105	12
226	Mass...	696	647	Palmer, Miller's Falls.....	Central Vermont, (late New London Northern)	35	11
227	Mich...	12515	24015	Bay City, Monroe.....	Flint and Pere Marquette.....	132	15
228	Conn...	926	902	New London, Palmer .....	Central Vermont, (late Vermont Central.)	65	11
229	Conn...	926	902	Willimantic, Palmer.....	.....do .....	35	11
230	Ky...	9612a	20010	Evansville, Guthrie.....	Saint Louis and Southeastern, Consolidated, (late Saint Louis and Southeastern.)	110.66	12
231	R. I...	801	801	Providence, Worcester.....	Providence and Worcester.....	44	15
232	N. Y...	1037	1216	Buffalo, Lewiston .....	New York Central and Hudson River.	29	11
233	N. Y...	1029	1256	Syracuse, Oswego.....	Oswego and Syracuse .....	35½	12
234	Pa.....	2417	.....	Scranton, Northumberland..	Lackawanna and Bloomsburgh ..	80	14
235	Me...	1	1	Augusta, Skowhegan.....	Maine Central, (late Portland and Kennebeck.)	39	12
236	Ala...	6604	.....	Montgomery, Decatur .....	South and North Alabama .....	183.3	15
237	Wis...	13006	25003	Milwaukee, Berlin .....	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	14.40	12
238	Ill....	11412	23016	Bureau Junction, Peoria....	Chicago, Rock Island and Pacific	47	12
239	Tenn...	10006	19006	Nashville, Decatur.....	Nashville and Decatur .....	123½	12
240	Ohio...	9040	.....	Columbus, Athens .....	Columbus and Hocking Valley...	77.40	12
241	Conn...	925	901	Norwich, Worcester .....	Boston, Hartford and Erie .....	60	15
242	Mich...	12846	24029	Eatonawba, Negaunee .....	Chicago and Northwestern.....	62.25	15
243	Iowa...	11011	27029	Missouri Valley, Sioux City.	Sioux City and Pacific .....	76	15
244	Me...	19	34	Farmington, Brunswick ....	Androscoggin.....	71½	15
245	Mass...	688	644	Sterling Junction, Fitchburgh.	Boston, Clinton and Fitchburgh..	14	14
246	Iowa...	11001	27019	Keokuk, Des Moines .....	Keokuk and Des Moines .....	162	12
247	Mass...	640	631	South Framingham, Pratt's Junction.	Boston, Clinton, and Fitchburgh	29	17
248	N. Y...	1032	1205	Rochester, Avon.....	Erie .....	12	15
249	N. Y...	1016	1212	Troy, Schenectady.....	New York Central and Hudson River.	21	15
250	Pa.....	2408	.....	Chester, Port Deposit.....	Philadelphia and Baltimore Central.	35½	12
251	N. J...	2116	.....	Trenton, Intersection with Delaware, Lackawanna and Western Railroad.	Pennsylvania .....	61.37	17
252	Ind...	12004	22004	Kokomo, Peru.....	Indianapolis, Peru and Chicago ..	24	15
253	Tenn...	10007	19007	Nashville, Hickman .....	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	170	15
254	Miss...	7003	.....	Vicksburgh, Meridian .....	Vicksburgh and Meridian.....	142.30	14

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
61,345	65,529	126,874	24,835	827	12.6 by 8, f. f., a. l. ....	16*	\$80 00	61.55 miles at \$110. ....	214
33,460	20,566	54,026	22,047	734	11.6 by 6, f. f., a. l. 79 m., d. l. 31 m.	13½*	80 00	Main route; branches \$20, (221, 222.) In March, 1874.	215
70,303	38,212	108,515	43,596	727	12 by 10, f. f., a. l. ....	14½*	80 00	Main route; branch \$50, (488,) 60 days, in September, 1873, and January, 1874.	216
21,092	36,541	57,633	20,554	665	19 by 7, f. f., a. l. ....	9½*	80 00	.....	217
18,348	19,460	37,808	19,023	634	14.4 by 8, f. f., a. l. ....	6	80 00	.....	218
7,764	13,644	21,408	17,601	585	15 by 7.6, f. f., a. l. ....	12	80 00	.....	219
2,233	1,497	3,730	3,730	123	No r. a. ....	18	80 00	.....	220
3,294	689	3,983	3,393	113	No apt.; no r. a. ....	6	80 00	Branch; main route \$20, (215.) In March, 1874.	221
320	598	918	918	30	.....do.....	6	80 00	Branch; main route \$20, (215.) In March, 1874.	222
744,840	145,554	890,394	858,872	28,629	r. p. o., 51.6 by 10.9, f. f. c. 26 and m. c., d. l.	26	75 00	Transferred from Michigan section.	223
49,558	43,280	92,838	64,095	2,136	12 by 10, f. f., d. l. ....	12	75 00	Main route; branch \$75, (282.)	224
45,937	14,123	60,060	45,362	1,512	12.9 by 8.10, f. f. c., a. l. ....	7	75 00	.....	225
24,406	24,626	49,032	44,707	1,490	11.5 by 5.8, f. f., a. l. ....	6	75 00	.....	226
27,900	122,404	150,304	41,983	1,399	21 by 8.10½, f. f., a. l. ....	14½*	75 00	.....	227
34,716	32,632	67,348	41,423	1,380	11.5 by 5.8, f. f., a. l. ....	18	75 00	30 miles at \$100. ....	228
.....	.....	.....	37,869	1,261	.....do.....	18	75 00	Part; residue \$100, (152.)	229
24,516	35,976	60,492	35,578	1,126	12 by 6.6, f. f., a. l. ....	6	75 00	Company state mail usually carried 12 times a week.	230
31,161	30,665	61,826	31,322	1,044	14.10 by 6.1, 13.6 by 6.2, f. f. c., d. l.	18	75 00	.....	231
21,292	20,344	41,636	29,583	986	b. c. ....	6	75 00	.....	232
19,456	11,296	30,752	22,783	867	11 by 6, fixtures, d. l. ....	18	75 00	.....	233
24,165	26,407	50,572	25,745	957	11 by 6.8, f. f., a. l. ....	7½*	75 00	.....	234
17,020	31,612	48,632	25,239	841	r. p. o., 42 by 9, d. l. to Fairfield, 22 m.; r. a. apt., 16 by —, a. l.	13*	75 00	.....	235
24,726	31,171	55,897	23,993	799	14.10 by 7.6, f. f., a. l. ....	8*	75 00	63.8 miles at \$100. ....	236
32,242	16,753	49,001	23,703	790	22.6 by 10.3, f. f., a. l. ....	12	75 00	.....	237
12,558	9,657	22,215	23,581	785	14 by 10, f. f., a. l. ....	12	75 00	.....	238
22,539	14,297	36,836	22,995	766	15 by 7.8, f. f., a. l. ....	12	75 00	.....	239
21,372	14,024	35,396	22,660	755	14 by 10, f. f., a. l. ....	12	75 00	Main route; branch \$40, (675.)	240
21,395	20,187	41,582	21,317	710	12 by 7, f. f., a. l. ....	15*	75 00	.....	241
13,404	7,517	20,921	21,321	710	18 by 10, f. f., a. l. ....	12	75 00	.....	242
18,537	8,499	27,036	21,133	704	20 by —, f. f., a. l. ....	12	75 00	Part; residue \$50, (471.) In May, 1874.	243
15,340	20,318	35,658	21,104	703	12 by —, fixtures, a. l. ....	6	75 00	.....	244
16,672	13,404	30,076	20,755	691	12 by 6.6, f. f., d. l. beyond Pratt's Junction; no r. a. residue, 5 m.	25½*	75 00	.....	245
16,455	24,031	40,486	20,081	684	16.6 by 9, f. f., a. l. ....	12	75 00	Part. No returns from residue.	246
5,814	13,033	18,847	20,015	667	12 by 6.6, f. f., d. l. ....	12	75 00	.....	247
2,629	8,189	10,818	19,398	646	b. c.; no r. a. ....	12	75 00	.....	248
2,026	8,566	10,592	19,237	641	b. c. ....	18	75 00	.....	249
1,542	18,401	19,943	19,197	639	½ car, d. l. ....	12	75 00	In August, 1874. ....	250
3,443	16,014	19,457	18,506	617	9.6 by 6, f. f., a. l. ....	20½*	75 00	.....	251
.....	.....	.....	18,398	613	12 by 8, f. f., a. l. ....	18	75 00	Part; residue \$150, (94.)	252
9,156	13,364	22,520	17,305	577	12 by 9, f. f., a. l. ....	12½*	75 00	.....	253
4,471	32,290	36,761	16,646	554	12.6 by 7.1, f. f., a. l. ....	6	75 00	45½ miles at \$100. ....	254

E.—Table showing the weight of the mails, the speed with which they

			New number of route.	Terminal.	Corporate title of company carrying the mail.	Length of route. Miles.	Miles per hour.
255	Ill ....	11433	23033	Beardstown, Shawneetown...	Springfield and Illinois South-eastern.	229.792	
256	Ga....	6010	.....	Macon, Columbus .....	Southwestern .....	100	22
257	Pa....	2416	.....	Hazle Creek Bridge, Tom-blicken.	Lehigh Valley .....	25.2	26
258	Mo ...	10307	28007	Moberly, Ottumwa .....	Saint Louis, Kansas City and Northern, (late North Mis-souri.)	131	22
259	N. C. ..	5001	.....	Raleigh, Weldon .....	Raleigh and Gaston .....	97	28
260	Ala..	6604	.....	Calera, Decatur .....	South and North Alabama .....	119.5	28
261	Mich	12503	24002	Monroe, Adrian .....	Lake Shore & Michigan Southern	35	21
262	N. J. .	2109	.....	Philadelphia, Pemberton Junction.	Pennsylvania .....	25	30
263	Ohio..	9033	.....	Morrow, Dresden .....	Cincinnati & Muskingum Valley	149.4	25
264	Ga ..	6015	.....	Fort Valley, Euftaula .....	Southwestern .....	115	26
265	S. C. ..	5605	.....	Branchville, Charleston...	South Carolina .....	62	12
266	Minn	13507	28009	Saint Paul, Sank Rapids ..	Saint Paul and Pacific .....	72	12
267	N. J. .	2113	.....	Millville, Cape May .....	West Jersey .....	41	28
268	Penn	2427	.....	Lancaster, Middletown .....	Pennsylvania .....	31.2	21
269	Mich	12517	24017	Detroit, Howard City .....	Detroit, Lansing & Lake Michigan	164	29
270	Ala..	6607	.....	Opelika, Columbus .....	Western, of Alabama .....	28	15
271	Pa ..	2444	.....	Meadville, Oil City .....	Atlantic and Great Western ...	36.5	21
272	Ohio	9022	.....	Clayton, Keokuk .....	Toledo, Wabash and Western...	44	22
273	Pa....	2400	.....	Honedale, Lackawaxen ...	Erie .....	25	28
274	Md .	3507	.....	Lake Roland, Hagerstown ..	Western Maryland .....	54	24
275	Pa ..	2406	.....	Chester, Port Deposit .....	Philadelphia and Baltimore Cen-tral.	39	28
276	Miss..	7003	.....	Jackson, Meridian .....	Vicksburgh and Meridian .....	25.4	14
277	Conn .	932	903	Middletown, Berlin .....	New York, New Haven and Hart-ford.	19	28
278	N. Y. .	1021	1243	Plattsburgh, Canada Line...	Montreal and Plattsburgh .....	23	22
279	Wis ..	13008	25006	Horicon, Portage .....	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	45.5	29
280	Pa....	2404	.....	Landedale, Doylestown ....	North Pennsylvania .....	26	23
281	Fla ...	6402	.....	Lake City, Quincy .....	Jacksonville, Pensacola & Mobile	131.25	15
282	Conn	938	906	Farmington, New Hartford	New Haven and Northampton ..	16	28
283	Conn .	942	908	Waterbury, Watertown....	Naugatuck .....	51	28
284	Cal ..	14707	46007	Davisville, Knight's Landing	California Pacific .....	12.2	26
285	Miss .	7006	.....	Grand Gulf, Port Gibson ..	Grand Gulf and Port Gibson ...	2	28
286	Cal ..	14728	46013	Wilmington, Los Angeles	Los Angeles and San Pedro ....	22	28
287	Ga ..	6017	.....	Atlanta, Charlotte .....	Atlanta and Richmond Air-Line	229.1	14
288	N. Y. .	1561	1273	Fonda, Gloversville .....	Fonda, Johnstown & Gloversville	10	24
289	Mich	12529	24013	Detroit, Bay City .....	Detroit and Bay City .....	111	12
290	Wis ..	13020	25018	Milwaukee, Two Rivers ....	Milwaukee, Lake Shore and Western.	25	28
291	N. J. .	2115	.....	Jamesburgh, Freehold .....	Freehold and Jamesburgh Agri-cultural.	11.5	28
292	Ill ...	11415	23009	Peoria, Galesburgh .....	Chicago, Burlington and Quincy	54	24
293	Ill ....	11415	23009	Peoria, Galesburgh .....	.....do .....	54	24
294	Ohio ..	9034	.....	Dayton, Richmond .....	Pittsburgh, Cincinnati and Saint Louis.	42	21
295	N. Y. {	1025	1283	Utica, Watertown .....	Utica and Black River .....	21	25
		1181					
296	Pa....	2414	.....	Port Clinton, Williamsport	Philadelphia and Reading....	121	22

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
25,641	24,310	49,951	16,565	552	11 by 7, f. f., s. l.	6	\$75 00		255
10,042	8,184	18,232	15,630	521	11 by 6.9, f. f., s. l.	10*	75 00		256
14,212	7,738	21,950	15,531	517	10 by 7, f. f., d. l. 13.8 m., s. l. residue.	13*	75 00		257
21,108	13,000	38,198	15,477	515	22 by 7.6, f. f., s. l.	12	75 00		258
9,307	12,997	22,304	15,433	514	11 by 6, f. f., s. l.	6	75 00		259
			15,433	514	14.10 by 7.6, f. f., s. l.	6	75 00	Part; residue \$100, (155.)	260
7,758	9,022	16,780	14,886	496	11.10 by 7.1, f. f., s. l.	6	75 00		261
			14,857	495	8 by 6.6, fixtures, s. l.	12	75 00	Part; residue \$50, (429.)	262
21,631	21,323	42,954	14,038	467	13.6 by 7, s. l.	12½*	75 00		263
10,308	9,751	26,057	12,984	432	14 by 8.9, f. f., s. l.	11	75 00	Main route; branches \$50, (499,) and \$40, (671.)	264
8,444	5,893	14,337	12,648	421	16.2 by 8.2, f. f., d. l.	13	75 00	Branch; main route \$125, (123.)	265
13,492	5,601	19,093	12,440	414	12.6 by 9, f. f., s. l.	11½*	75 00		266
8,566	6,294	14,860	11,398	379	8 by 6.4, f. f., s. l.	12	75 00	Speed 22 miles per hour in winter.	267
14,237	5,590	19,827	12,112	404	10.10 by 8, f. f., s. l.	15*	75 00		268
23,207	9,491	32,698	11,279	375	10 by 9, f. f., s. l.	6	75 00		269
6,245	5,604	11,849	10,814	360	19.4 by 8.8, f. f., s. l.	7	75 00		270
10,083	7,423	17,506	10,410	347	12.6 by 8, f. f., s. l.	9*	75 00		271
7,322	7,227	14,549	10,399	346	12 by —, f. f., s. l.	12	75 00	Branch; main route \$225, (23.)	272
4,405	7,599	12,004	10,287	343	b. c.; no r. a.	12	75 00		273
15,760	9,677	25,437	9,644	321	10 by 9, f. f., d. l.	12	75 00		274
14,325	11,000	25,405	11,123	320	½ car, d. l.	12	75 00	In October, 1873.	275
			9,310	310	12.6 by 7.1, f. f., s. l.	6	75 00	Part; residue \$100, (168.)	276
3,189	4,397	7,586	6,797	226	In b. c.; no r. a.	18	75 00	In June, 1874.	277
3,327	5,048	8,375	6,249	208	No apt.; no r. a.	12	75 00		278
7,166	5,109	12,275	5,841	194	23 by 10, f. f., s. l.	6	75 00		279
2,655	4,910	7,565	5,793	193	10.6 by 6.6, f. f., s. l.	18	75 00	Branch; main route \$100, (160.)	280
9,408	11,714	21,122	5,594	186	12.4 by 6.9, f. f., s. l.	7	75 00	Main route, part; residue \$75; branch \$30, (722.)	281
4,780	3,120	7,900	3,907	130	12 by 10, f. f., d. l.	12	75 00	Branch; main route \$75, (224.)	282
2,244	1,133	3,377	2,987	99	No r. a.	6	75 00	Branch; main route \$85, (208.)	283
3,023	1,268	4,291	2,775	92	11.8 by 8.10, f. f.; no r. a.	7	75 00	Branch; main route \$150, (99.)	284
1,283	521	1,804	1,804	60	No r. a.	6	75 00		285
456	834	1,340	1,043	35	No apt.	6	75 00	In May, 1874.	286
11,942	12,459	24,401	14,271	475	22.6 by 10, f. f., s. l.	7	70 00		287
8,664	5,314	13,978	11,126	370	No r. a.	12	70 00		288
11,579	7,503	22,382	12,679	422	14 by 7.6, f. f., s. l.	12	68 00		289
12,075	7,306	19,381	12,358	411	12 by —, f. f., s. l.	12	67 00	Main route; branch \$40, (672.) In June, 1874.	290
3,727	2,314	6,041	5,420	180	No apt.; no r. a.	12	66 37		291
34,383	22,177	66,566	47,574	1,535	r. p. o., (say) 50 by 9, 50 by 9, 38 by 9, (average 45.4 by 9.) f. f. c., s. l.	12	65 00	r. p. o., with platforms, 55.6 by 9, 55.6 by 9, 41 by 9. In Nov., 1873.	292
24,609	19,784	48,393	31,610	1,053	r. p. o., (say) 50 by 9, 50 by 9, 38 by 9, (average 45.4 by 9.) f. f. c., s. l.	12	65 00	r. p. o., with platforms, 55.6 by 9, 55.6 by 9, 41 by 9. In Oct., 1873.	293
9,237	6,056	15,293	11,844	394	15.6 by 8.6, f. f., s. l.	12	65 00		294
19,181	13,193	32,374	11,067	368	13 by 9, f. f., s. l.	12	65 00		295
14,224	15,995	30,279	9,643	321	10.1 by 6.10, 7.8 by 6.8, f. f., s. l.	7*	65 00		296

E.—Table showing the weight of mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
297	N. Y..	1046	1251	Skanateles Junction, Skanateles.	Skanateles.....	54	13
298	Del...	3102	.....	Delmar, Crisfield.....	Eastern Shore.....	38	20
299	N. Y..	1525	1278	Cooperstown, Cooperstown Junction.	Cooperstown and Susquehanna Valley.	16	20
300	Mass	732	654	East Salisbury, Amesbury..	Eastern.....	4	20
301	N. J..	2113	.....	Elmer, Salem.....	West Jersey.....	16.60	20
302	N. Y..	1524	1279	Chatham Village, Rutland..	Central Vermont, (late Harlem Extension.)	111.3	19
303	Pa....	2412	.....	Penn Haven Junction, Audenreid.	Lehigh Valley.....	17.5	20
304	Wis..	13018	25017	Menasha, Stevens' Point....	Wisconsin Central, operated by Phillips & Colby Construction Company.	65.27	20
305	Mich.	12512	24011	Kalamazoo, Grand Rapids..	Lake Shore & Michigan Southern	53½	21
306	Pa....	2440	.....	Blairsville, Allegheny.....	Pennsylvania.....	63.7	17
307	Ill....	11411	23027	State Line, Warsaw.....	Toledo, Peoria and Warsaw.....	227.75	20
308	Pa....	2436	.....	Tyrone, Clearfield.....	Pennsylvania.....	40.6	15
309	Iowa..	11004	27017	Wilton, Leavenworth.....	Chicago, Rock Island and Pacific	324.77	21
310	Pa....	2439	.....	Tyrone, Lookhaven.....	Pennsylvania.....	55.1	20
311	Pa....	2456	.....	Pittsburgh, Washington....	Pittsburgh, Cincinnati and Saint Louis.	22.8	18
312	Kans.	14212	33009	Atchison, Lincoln.....	Atchison and Nebraska.....	152.25	21½
313	Kans.	14314	33012	Junction City, Clay Centre	Junction and Fort Kearney.....	33.85	15
314	Wash.	.....	43001	Kalama, Tacoma.....	Northern Pacific.....	106.6	17
315	Mass.	721	650	Pittsfield, North Adams....	Boston and Albany.....	21	18
316	Kans.	14311	33011	Lawrence, Carbondale.....	Lawrence and Southwestern....	32.9	15
317	Ohio..	9047	.....	Mansfield, Toledo.....	Pennsylvania Company.....	22.1	25
318	Pa....	2435	.....	Huntington, Mount Dallas..	Huntington and Broad Top.....	50	20
319	Minn.	13501	26016	La Crosse, Winnebago City	Southern Minnesota.....	170.50	17
320	Kans.	14006	33006	Parsons, Junction City.....	Missouri, Kansas and Texas....	156½	19
321	Mass.	606	606	Boston, Woonsocket Falls...	Boston, Hartford and Erie.....	33.65	20
322	S. C..	5605	.....	Kingsville, Columbia.....	South Carolina.....	27	17
323	Ohio..	9026	.....	Dayton, Union City.....	Dayton and Union.....	43.17	21
324	Pa....	2434	.....	Hanover, Gettysburgh.....	Susquehanna, Gettysburgh and Potomac.	17.5	20
325	Wis..	13018	25017	Menasha, Colby.....	Wisconsin Central, operated by Phillips & Colby Construction Company.	114.20	20
326	N. Y..	1524	1279	North Bennington, State Line	Central Vermont, (late Harlem Extension.)	2	19
327	Pa....	2439	.....	Milesburgh, Bellefonte.....	Pennsylvania.....	2.7	20
328	Va....	4405	.....	Manassas, Strasburgh Junction.	Washington City, Virginia Midland and Great Southern, (late Orange, Alexandria & Manassas.)	111	20
329	Me....	9a	3	Newport, Dexter.....	Maine Central.....	14	20
330	Ohio..	9006	.....	Leavittsburgh, Sharon.....	Atlantic and Great Western....	31.61	25
331	Iowa..	11006	27020	Farley, Cedar Rapids.....	Dubuque and Southwestern....	55.37	14½
332	Wis..	13012	25019	Sheboygan, Princeton.....	Sheboygan and Fond du Lac.....	79.05	20
333	Conn.	607	975	Putnam, Willimantic.....	Boston, Hartford and Erie.....	24.62	20
334	Pa....	2475	.....	Mount Dallas, Cumberland..	Pennsylvania.....	47.6	20
335	N. Y..	1033	1206	Avon, Dansville.....	Erie.....	31.73	20
336	N. H..	255	254	Concord, Claremont Junction.	Concord and Claremont.....	54.92	21
337	N. H..	278	257	Nashua, Wilton.....	Boston and Lowell and Nashua and Lowell.	16	25
338	Me....	117	7	Portland, Rochester.....	Portland and Rochester.....	52	20
339	R. I..	803	803	Providence, Bristol.....	Providence, Warren and Bristol	14.6	17
340	Ohio..	9005	.....	Hudson, Columbus.....	Cleveland, Mount Vernon and Delaware.	141.25	20
341	Ohio..	9022	.....	Bluff City, Naples.....	Toledo, Wabash and Western...	4	16
342	Iowa..	11012	27001	Burlington, Plymouth.....	Burlington, Cedar Rapids and Minnesota.	22.5	20
343	Pa....	2425	.....	Irvine, Corry.....	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	95	20
344	Iowa..	11016	27012	Clinton, La Crescent Junction	Chicago, Dubuque & Minnesota	172.57	20
345	Ohio..	9035	.....	Valley Junction, Hagerstown	White Water Valley.....	70.45	19



are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
3,112	2,039	5,121	3,106	104	13 by 8, fixtures; no r. a . . .	12	\$63 63	.....	297
11,546	7,474	19,020	12,361	412	28 by 9.4, f. f. c., a. l . . . . .	6	62 50	.....	298
5,511	6,170	11,681	8,257	275	No r. a . . . . .	12	62 50	.....	299
2,823	1,851	4,736	4,255	141	.....do . . . . .	15	62 50	.....	300
6,524	4,221	10,744	8,333	277	7.7 by 6.8, f. f.; no r. a . . . . .	12	60 24	.....	301
41,127	42,103	83,230	54,809	1,826	17.6 by 6.6, f. f., a. l . . . . .	6	60 00	Main route; branch \$60, (326.)	302
21,399	11,336	32,935	15,649	521	10 by 7, f. f., a. l. 8 miles . . .	12*	60 00	.....	303
12,745	6,892	19,637	13,571	451	14.2 by 7.10, f. f., a. l . . . . .	6	60 00	Part; residue \$40, (678.) In May, 1874.	304
13,612	6,233	19,845	12,695	423	17.3 by 9, f. f., a. l . . . . .	12	60 00	.....	305
9,297	17,245	26,542	11,367	372	10.9 by 8, f. f., a. l . . . . .	9½*	60 00	.....	306
27,222	23,117	50,399	11,082	369	23 by 8.9, f. f. c., a. l . . . . .	6	00 00	Main route; branch \$5, (577.)	307
9,222	5,690	14,972	11,004	366	10.9 by 8, f. f., a. l . . . . .	12	60 00	.....	308
36,327	21,663	57,990	10,634	354	18.5 by 9.5, f. f., a. l . . . . .	6	60 00	.....	309
8,149	10,932	19,081	10,562	352	10.9 by 8, f. f., a. l . . . . .	12	60 00	Main route; branch \$60, (327.)	310
8,935	5,079	14,014	10,541	351	8.6 by 6.11, f. f., d. l . . . . .	12	60 00	.....	311
20,032	18,752	38,784	10,381	346	12 by —, f. f., a. l . . . . .	7	60 00	.....	312
6,264	4,044	10,308	10,136	337	— by —, f. f., a. l . . . . .	6	60 00	.....	313
9,015	3,800	12,815	9,664	322	12 by 5, f. f., a. l . . . . .	6	60 00	In May, 1874 . . . . .	314
6,609	4,954	11,563	9,572	319	No apt . . . . .	18*	60 00	.....	315
8,065	5,134	13,198	9,296	310	8.4 by 8, f. f., a. l . . . . .	6	60 00	In August, 1873 . . . . .	316
8,779	8,275	17,054	9,069	302	9.6 by 7.6, f. f., a. l . . . . .	12	60 00	.....	317
10,249	8,056	18,905	9,047	301	7.1 by 6.6, f. f., a. l . . . . .	6	60 00	.....	318
12,547	11,167	23,714	8,997	299	12 by 8, f. f., a. l . . . . .	6	60 00	.....	319
11,221	9,020	20,901	8,992	299	18.8 by 6.8, f. f., a. l . . . . .	6	60 00	In June, 1874 . . . . .	320
12,525	8,880	21,465	8,991	296	No r. a . . . . .	15*	60 00	.....	321
3,269	5,991	9,260	8,705	290	16.2 by 8.2, f. f., d. l . . . . .	13	60 00	Branch; main route \$125, (123.)	322
9,240	6,022	15,262	8,297	276	11 by 7, f. f., a. l . . . . .	6	60 00	In July, 1873 . . . . .	323
5,356	4,692	10,048	8,295	276	8 by 6, f. f. d. l . . . . .	12	60 00	.....	324
12,745	6,892	19,637	7,302	243	14.2 by 7.10, f. f., a. l., 63 miles	6	60 00	In May, 1874. Pay fixed to Stevens' Point, 63.27 miles.	325
1,096	6,157	7,253	7,253	241	17.6 by 6.6, f. f., a. l . . . . .	6	60 00	Branch; main route \$60, (302.)	326
3,020	3,942	6,962	6,962	232	10.9 by 8, f. f., a. l . . . . .	12	60 00	Branch; main route \$60, (310.)	327
8,501	5,237	13,738	6,499	216	11.6 by 8.9, f. f., a. l . . . . .	6	60 00	Part; residue transferred to Baltimore & Ohio Railroad Co.	328
3,872	2,629	6,507	5,887	196	No r. a . . . . .	12	60 00	.....	329
2,122	5,547	13,729	5,791	192	12.6 by 8, f. f., a. l . . . . .	9½*	60 00	Part; residue \$100, (173.)	330
2,675	9,969	12,644	5,703	190	14 by 11, f. f., a. l . . . . .	6	60 00	.....	331
6,366	5,001	11,367	5,369	179	10 by 7.6, f. f., a. l . . . . .	6½*	60 00	.....	332
5,074	4,101	9,175	5,109	170	12.7 by 6.10, 12.10 by 6.10, f. f., d. l . . . . .	12	60 00	Part of 607 old . . . . .	333
7,223	12,933	20,216	3,208	106	9.2 by 6.11, f. f., a. l . . . . .	7*	60 00	.....	334
22,212	21,977	50,189	10,192	340	b. c.; no r. a . . . . .	12	59 37	.....	335
8,793	5,832	14,625	36,226	1,207	12 by 6.8, f. f., d. l . . . . .	12	57 69	.....	336
14,079	11,537	25,616	11,485	383	36 cubic feet; no r. a . . . . .	18	56 25	.....	337
2,246	3,291	11,527	10,831	361	13 by 6, 12 by 7, d. l . . . . .	12	55 55	.....	338
37,951	40,332	78,280	9,395	313	No r. a . . . . .	12	55 10	.....	339
19,460	5,402	24,862	40,290	1,342	19 by 8.6, f. f., a. l . . . . .	9½*	55 00	In May, 1874 . . . . .	340
27,929	26,551	54,480	24,862	829	12 by —, f. f., a. l . . . . .	12	55 00	Branch; main route \$225, (23.)	341
24,619	21,244	45,863	19,902	663	12 by 9.34, f. f., a. l . . . . .	6½*	55 00	.....	342
20,962	12,585	33,553	12,215	407	8 by 7, f. f., a. l . . . . .	12	55 00	44.8 miles at \$85 . . . . .	343
11,243	8,014	10,257	11,558	385	18.6 by 8.10, f. f. c., a. l . . . . .	6	55 00	In April, 1874 . . . . .	344
			11,196	372	12 by 7.4, f. f., a. l . . . . .	6	55 00	.....	345

E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles	
346	Pa . . . .	2443	.....	Branch Junction, Indiana...	Pennsylvania .....	19	16
347	Kans . . .	14004	33004	Elwood, Hastings .....	Saint Joe and Denver City .....	22 72	25
348	Iowa . . .	11016	27012	Clinton, La Crescent Junction	Chicago, Dubuque & Minnesota ..	178.57	30
349	Pa . . . .	2425	.....	Irvine, Oil City .....	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	50.2	30
350	N. C . . .	5005	.....	Goldsborough, Morehead City	Atlantic and North Carolina .....	95	20
351	Mich . . .	12955	24034	Walton Junction, Traverse City.	Continental Improvement Co .....	26.26	20
352	Mass . . .	672	639	New Bedford, West Wareham.	New Bedford, (late New Bedford and Taunton.)	16½	36
353	Mass . . .	.....	737	Cohasset Narrows, Wood's Hole.	Cape Cod, operated by Old Colony and Newport.	17.67	25
354	Ind . . . .	12026	22026	Auburn, Logansport .....	Detroit, Eel River and Illinois ..	82.8	25
355	Ohio . . .	9008	.....	Elyria, Millbury .....	Lake Shore & Michigan Southern	74.9	25
356	Wis . . . .	13017	25012	Winona, Winona Junction..	Chicago and Northwestern .....	28	25
357	Mass . . .	731	653	South Braintree Junction, Fall River,	Old Colony and Newport .....	34	30
358	Vt . . . .	521	410	West Concord, Hyde Park..	Portland and Ogdensburgh .....	58.93	25
359	Mo . . . .	10523a	23022	Road House, Mexico .....	Chicago and Alton .....	90	25
360	Vt . . . .	523	522	Richford, Newport .....	Missisquoi and Clyde Rivers .....	31.38	30
361	Md . . . .	3518	.....	Saint Denis, Point of Rocks	Baltimore and Ohio .....	60	22
362	Wis . . . .	13014	25014	Elroy, Saint Paul .....	West Wisconsin .....	198.40	25
363	N. H . . .	331	261	Groveton Junction, Wells River.	Boston, Concord and Montreal ..	53.1	25
364	Mass . . .	745	660	Worcester, Gardner .....	Boston, Barre and Gardner .....	27	25
365	Ill . . . .	11903	23025	Hannibal, Naples .....	Toledo, Wabash and Western .....	45.5	15
366	Nebr . . .	14483	34005	Nebraska City, Seward .....	Midland Pacific .....	84.1	17
367	N. Y . . .	1030	1214	Canandaigua, Niagara Falls	New York Central and Hudson River.	97	30
368	Pa . . . .	2464	.....	Pittsburgh, Cumberland .....	Pittsburgh and Connellsville .....	147.8	25
369	Nebr . . .	14479	34004	Omaha, Concord .....	Burlington and Missouri River in Nebraska.	21½	30
370	Wis . . . .	13396	25016	Milwaukee, Green Bay, Menasha.	Wisconsin Central, operated by Phillips & Colby Construction Company.	127.54	20
371	Utah . . .	16633	41001	Salt Lake City, Ogden .....	Utah Central .....	36.50	15
372	N. Y . . .	1228	1229	Utica, North Norwich .....	Delaware, Lackawanna & Western	48½	21
373	Cal . . . .	14876	46010	Lathrop, Goshen .....	Central Pacific .....	144.91	30
374	Mo . . . .	10502	28002	Bismarck, Argenta .....	Saint Louis and Iron Mountain and Cairo and Fulton.	262	17½
375	Mich . . .	12511	24010	Jackson, Grand Rapids .....	Michigan Central .....	94½	25
376	Mich . . .	12505	24004	White Pigeon, Kalamazoo..	Lake Shore and Michigan Southern	38.33	22½
377	Vt . . . .	520	409	Saint Albans, Richford .....	Central Vermont, (late Vermont Central and Vermont & Canada.)	28.66	15½
378	Colo . . .	17051	38003	Hughes' Station, Erio .....	Denver and Boulder Valley .....	15	15
379	Minn . . .	13505	26004	Saint Paul, Sioux City .....	Saint Paul and Sioux City .....	245	30
380	Minn . . .	13508	26006	Saint Paul, Du Luth .....	Lake Superior and Mississippi ..	156	20
381	N. Y . . .	1036	1215	Buffalo, Lockport .....	New York Central and Hudson River.	22	30
382	Ill . . . .	11432	23011	Burlington, Quincy .....	Chicago, Burlington and Quincy ..	71.85	21½
383	Ill . . . .	11414	23038	Peoria, Jacksonville .....	Peoria, Pekin and Jacksonville ..	87.40	20
384	Cal . . . .	14945	46014	Goshen, Tipton .....	Southern Pacific .....	21	30
385	Ind . . . .	12013	22013	State Line, Logansport .....	Pittsburgh, Cincinnati and Saint Louis.	61	30
386	Nebr . . .	14451	34002	Plattsmouth, Kearney Junction.	Burlington and Missouri River in Nebraska.	191	30
387	Wis . . . .	13003	25013	Racine, Rock Island Junction	Western Union .....	188.40	20
388	Colo . . .	17064	38001	Denver, Pueblo .....	Denver and Rio Grande .....	119	17½
389	Va . . . .	4413	.....	Petersburgh, Lynchburgh ..	Atlantic, Mississippi and Ohio ..	123	17½
390	Mass . . .	619	618	Salem, Gloucester .....	Eastern .....	16	30

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
21,171	9,483	30,659	10,779	359	b. c.; no r. a.	12	\$55 00		346
19,438	9,011	28,449	9,065	302	17 by 7, f. f., s. l.	6	55 00		347
17,687	11,916	29,603	8,703	290	18 by 9, 12.2 by 7, f. f. c., s. l.	6	55 00	In October, 1873.	348
			8,379	279	8 by 7, f. f., s. l.	12	55 00	Part; residue \$35, (210.)	349
8,790	5,209	14,008	8,182	273	7.10 by 6.6, f. f., s. l.	6	55 00		350
5,258	2,939	8,197	7,774	259	14 by 7, s. l.	6	55 00		351
3,555	3,523	7,078	5,692	190	2.7 by 1.11, locked; no r. a.	15*	55 00		352
6,451	2,713	9,164	8,064	262	b. c.; no r. a.	6	53 00		353
9,374	11,201	20,575	6,815	227	15 by 10, f. f., s. l.	6	52 00		354
101,974	175,891	119,563	117,263	39,087	r. p. o., 51.6 by 10.9, f. f. c. and m. c., d. l.	26	50 00		355
91,662	31,256	122,924	122,924	4,097	r. p. o., (say) 40 by 10.3, f. f. c., s. l., and r. a. on w. t.	12	50 00	r. p. o., with platforms, 46 by 10.3.	356
75,921	52,750	128,731	73,035	2,501	12.6 by 9, f. f., m. c., d. l. to Middleborough, 25.07 miles; no r. a. residue.	12	50 00		357
45,015	41,397	86,412	67,841	2,261	15 by 6.6, f. f., s. l.	6	50 00		358
42,817	22,230	71,047	42,568	1,419	r. p. o., 32 by 10, f. f. c. and m. c., s. l.	14½	50 00	In May, 1874.	359
20,115	20,443	40,558	38,874	1,295	13.5 by 7.4, f. f., s. l.	6	50 00		360
25,001	18,758	43,759	31,376	1,045	17 by 8.7½, f. f., s. l.	12	50 00	In August, 1874.	361
26,090	19,932	46,022	25,664	855	40 by 8, f. f. c., s. l.	12	50 00	Main route; branch \$30, (719.)	362
17,754	22,036	39,790	24,339	811	17 by 6.8, f. f., s. l.	10½*	50 00		363
14,351	12,142	26,499	22,704	757	10 by —, fixtures, d. l.	12	50 00		364
9,221	23,129	32,410	22,614	753	12 by —, f. f., s. l.	12	50 00	Main route; branch \$50, (533.)	365
4,944	3,361	8,302	3,517	117	12 by 7, f. f., s. l.	6	50 00		366
26,429	20,159	46,648	21,346	711	14.6 by 8.6, 11 by 9, f. f., s. l.	6	50 00		367
23,670	24,974	44,644	20,942	698	14.6 by 8.6, f. f. and m. c., s. l.	12	50 00	Main route; branches \$50, (441, 601.)	368
14,634	6,855	21,489	20,717	690	12.6 by 7, f. f., s. l.	6	50 00		369
26,986	15,724	42,710	19,758	658	14.2 by 7 10, f. f., s. l.	6	50 00	In May, 1874.	370
6,250	14,347	20,606	19,580	652	No r. a.	14	50 00		371
24,056	14,143	38,199	19,135	637	19.3 by 6.7, f. f., s. l.	12	50 00		372
17,532	7,616	25,148	19,026	633	14.7 by 8.10, f. f., s. l.	7	50 00		373
20,394	16,270	36,664	18,687	623	10.4 by 6.10, s. l.	12	50 00	Branch; main route \$100, (167.)	374
17,409	7,560	24,969	17,647	588	14 by 10, f. f., s. l.	6	50 00		375
16,261	7,486	23,747	17,158	572	17.3 by 9, f. f., s. l.	12	50 00		376
11,291	9,128	20,479	16,704	556	9.6 by 7.9, f. f., s. l.	6	50 00		377
10,792	6,562	17,360	16,499	550	— by —, f. f., s. l.	6	50 00	Weight reported to Boulder City, 27 miles.	378
34,729	19,705	54,434	16,377	545	20.3 by 9.3, 22.4 by 9.3, f. f., s. l.	2½*	50 00	86½ miles at \$75; distance counted only to Lemara.	379
16,509	6,923	23,432	16,312	543	30 by 10, f. f., s. l.	7½*	50 00		380
8,523	12,930	21,513	16,278	542	b. c.	12	50 00		381
12,242	11,648	24,496	15,793	526	10 by 7, f. f., s. l.	6	50 00		382
13,453	12,445	25,898	15,751	525	13 by 8, f. f., s. l.	6½*	50 00	Additional trips for portion of year; in March, 1874.	383
12,125	5,345	17,470	15,223	507	14.7 by 8.10, f. f., s. l.	7	50 00		384
11,321	10,590	21,974	14,933	498	24 by 8, f. f. c., s. l.	6	50 00		385
21,629	13,224	34,913	14,503	483	18.6 by 7, f. f., s. l.	6	50 00		386
21,579	27,848	49,427	13,498	450	23 by 10, f. f., s. l.	6	50 00		387
12,291	7,170	20,061	13,014	433	9.5 by 5.10, f. f., s. l.	7	50 00		388
11,617	12,650	24,267	13,006	433	21 by 9, f. f., s. l.	6	50 00		389
5,405	5,992	14,398	12,062	402	No r. a.	18	50 00		390

E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Terminal.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
391	N. Y..	1042	1225	Oswego, Richland .....	Rome, Watertown and Ogdensburg.	22½	30
392	W. Va.	4293	.....	Huntington, Hinton .....	Chesapeake and Ohio .....	150.42	28
393	N. Y..	1010	1204	Newburgh, Chester .....	Erie .....	19.75	30
394	N. Y..	1582	1263	Port Henry, Ticonderoga...	New York and Canada, (late Vermont Central and Vermont and Canada.)	17	24
395	N. Y..	1574	1203	Buffalo, Suspension Bridge.	Erie .....	25.94	30
396	Va....	4412	.....	Petersburgh, Norfolk .....	Atlantic, Mississippi and Ohio ...	21½	25½
397	Mass..	656	636	Braintree Depot, Cohasset Junction.	South Shore .....	12	25
398	N. Y..	1024	1226	Watertown, Cape Vincent...	Rome, Watertown and Ogdensburg.	26	30
399	Iowa..	11010	27022	Waterloo, Mona .....	Illinois Central .....	20	15
400	Minn.	13838	26005	Du Luth, Moorhead .....	Northern Pacific .....	229	30
401	Ill....	11409	23008	Elmwood, Buda .....	Chicago, Burlington and Quincy..	45	1½
402	Mass..	637	628	Ayer, Mason Village .....	Fitchburgh .....	23	25
403	Mass..	703	649	South Vernon Junction, Keene.	Cheshire and Ashuelot .....	24	24
404	Cal...	14705	46005	Sacramento, Folsom City....	Sacramento Valley .....	21.2	30
405	Ill....	11901	23012	Streator, Aurora, Batavia ...	Chicago, Burlington and Quincy..	69.79	24½
406	N. H..	309	260	Brock's Crossing, Conway...	Portsmouth, Great Falls and Conway.	64.83	30
407	Wis...	13018	25017	Menasha, Neenah, Stevens' Point.	Wisconsin Central, (built and operated by Phillips & Colby Construction Company.)	65.27	30
408	Ill....	11409	23008	Rushville, Yates City .....	Chicago, Burlington and Quincy..	62.75	15½
409	Pa....	2452	.....	Greenville, Harrisville .....	Chenango and Allegheny .....	33.5	25
410	Ill....	11428	23040	Peoria, Rock Island .....	Peoria and Rock Island ...	92	25
411	N. Y..	1509	1249	Buffalo, Emporium .....	Buffalo, New York and Philadelphia.	123.51	25
412	Conn..	976	914	Hartford, New Saybrook....	Connecticut Valley .....	43.16	30
413	Mo...	10506	28006	Saint Joseph, Hopkins .....	Kansas City, Saint Joseph and Council Bluffs.	61½	24
414	N. Y..	1542	1276	Athens, Fairhaven .....	Southern Central .....	122	30
415	Mass..	641	632	South Framingham, Milford	Boston and Albany .....	12	25½
416	N. H..	256	255	Concord, Portsmouth .....	Concord .....	60	25½
417	Conn..	981	917	Litchfield, Hawleyville .....	Spepaug, (late Spepaug Valley) ..	32½	25½
418	Mass..	735	656	Mansfield, South Framingham.	Boston, Clinton and Fitchburgh..	22	24
419	Ky...	9843	20016	Maysville, Paris .....	Maysville and Lexington .....	50	30
420	N. Y..	1405	1228	Chenango Forks, Norwich ..	Delaware, Lackawanna and Western.	30.79	21
421	Colo..	17038	33004	Denver, Black Hawk .....	Colorado Central .....	32½	30
422	Mo...	10520a	23019	Quincy, Kirksville .....	Quincy, Missouri and Pacific ...	71.23	16
423	Iowa..	11018	27007	Creston, Hopkins .....	Burlington and Missouri River ..	44.4	22
424	Ind...	12019	22019	Fort Wayne, Connersville ..	Fort Wayne, Muncie and Cincinnati.	109	22
425	Mich..	12516	24016	East Saginaw, Reed City ...	Flint and Pere Marquette .....	90.47	15
426	Mich..	12509	24008	Jackson, Fort Wayne .....	Fort Wayne, Jackson & Saginaw	96.30	22
427	Mass..	658	741	Springfield, Athol .....	Springfield, Athol and Northeastern, (late Athol & Enfield.)	52.46	30
428	Mo...	10519a	28018	Quincy, Keokuk .....	Mississippi Valley and Western..	41	30
429	N. J..	2109	.....	Philadelphia, Hightstown...	Pennsylvania .....	52.5	30
430	Pa....	2413	.....	Pottsville, Herndon .....	Philadelphia and Reading .....	21.1	17½
431	Iowa..	11003	27005	Red Oak, Eastport .....	Burlington and Missouri River ..	50	21½
432	Ill....	11414	23038	Peoria, Jacksonville .....	Peoria, Pekin and Jacksonville..	87.40	30
433	Me...	188	10	Oldtown, Guilford .....	Consolidated European and North American, (late Bangor and Piscataquis.)	42.1	17
434	N. Y..	1566	1269	Ithaca, Cortland Village ....	Utica, Ithaca and Elmira .....	23	24
435	Ala...	6615	.....	Chattanooga, Meridian .....	Alabama and Chattanooga .....	299	12

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
8,236	8,609	16,845	11,550	385	No r. a .....	15	\$50 00		391
12,330	14,031	26,361	11,502	383	20.7 by 6.10, f. f., a. l .....	6	50 00		392
2,147	10,219	18,366	11,325	377	b. c.; no r. a .....	12	50 00	Main route; branch \$50, (539.)	393
5,373	6,609	11,982	11,115	370	14 by 6.8, f. f., a. l .....	6	50 00		394
10,342	726	11,068	11,068	369	b. c.; no r. a .....	13	50 00		395
9,215	5,961	15,196	11,070	369	21 by 9, f. f., a. l .....	6	50 00		396
10,685	6,525	17,210	11,022	367	b. c.; no r. a .....	12	50 00		397
9,619	5,203	14,822	10,923	364	No r. a .....	12	50 00		398
13,811	9,527	23,338	10,875	362	19.1½ by 9.2, f. f., a. l .....	12	50 00		399
10,253	5,256	15,509	10,849	361	13 by 7, f. f., a. l .....	6	50 00		400
4,516	10,026	14,534	10,691	356	22 by 8.6, f. f., a. l .....	6	50 00	Branch; main route \$50, (408.)	401
9,605	6,332	15,943	10,511	350	6 by 6, f. f., a. l .....	12	50 00		402
5,728	10,765	16,493	10,483	349	13.8 by 7.1, fixtures, a. l .....	12	50 00		403
7,094	3,384	10,478	10,478	349	6.6 by 5; no r. a .....	12	50 00		404
8,054	10,918	18,972	10,330	344	14 by 7, f. f., a. l .....	6	50 00		405
14,146	7,852	21,998	10,328	344	13 by 6, f. f., a. l .....	7*	50 00		406
9,371	4,559	13,930	10,097	336	14.2 by 7.10, f. f., a. l .....	6	50 00		407
7,072	12,636	19,708	9,954	331	22 by 8.6, f. f., a. l .....	6	50 00	Main route; branch \$50, (401.)	408
9,155	6,081	15,236	9,935	331	12.6 by 8, f. f., a. l .....	6	50 00		409
10,997	9,817	20,814	9,877	329	12 by 7, f. f., a. l .....	6	50 00		410
13,932	10,735	24,673	9,873	329	12 by 7.6, f. f., a. l .....	12	50 00		411
12,310	10,815	23,125	9,747	324	11 by 7, f. f., a. l .....	12	50 00		412
9,062	7,542	16,616	9,681	322	14.2 by 7, f. f., a. l .....	6	50 00	Branch; main route \$140, (104.)	413
24,690	25,792	50,488	9,645	321	15 by 8, f. f., a. l .....	6	50 00		414
6,854	4,954	11,808	9,568	318	No apt .....	24	50 00		415
9,395	14,211	23,606	9,474	315	12 by 6.8, f. f., a. l .....	12	50 00		416
6,022	8,236	14,312	9,431	314	9.6 by 6.6, f. f., a. l .....	12	50 00		417
7,229	6,152	14,047	9,448	314	No r. a .....	16½*	50 00		418
4,205	10,985	15,190	9,396	313	12 by 9, f. f., a. l .....	6	50 00		419
6,963	6,416	13,379	9,302	310	19.3 by 6.7, f. f., a. l .....	12	50 00		420
8,907	4,392	13,299	9,310	310	Express car, a. l .....	7	50 00	Main route; branch \$50, (598.)	421
8,533	7,264	15,797	9,243	308	14 by 7, f. f. c., a. l .....	6	50 00		422
6,102	4,728	10,830	9,120	306	13 by 8.6, f. f., a. l .....	6	50 00		423
11,005	12,543	23,548	9,192	306	12 by 7.8, f. f., a. l .....	6	50 00		424
11,195	6,017	17,212	8,790	293	21 by 8.10½, f. f., a. l .....	7½*	50 00		425
10,576	10,526	21,102	8,804	292	10.6 by 7.6, f. f., a. l .....	6	50 00		426
2,045	6,094	14,129	8,743	291	12 by 6.6, f. f., a. l .....	6	50 00		427
8,642	6,823	15,471	8,696	290	12 by 6.9, f. f., a. l., 13 by 9 add'l for through mails.	6	50 00		428
12,536	11,601	24,187	2,463	282	8 by 6.6, fixtures, a. l .....	9½*	50 00	25 miles at \$75; main route; branch \$50, (632.)	429
12,992	13,602	26,684	8,281	276	10 by 7, 9 by 6, 6.6 by 6.4, f. f., a. l .....	10½*	50 00		430
8,628	4,331	13,019	8,226	276	14 by 7, f. f., a. l .....	10*	50 00	Branch; main route \$175, (60.)	431
9,092	8,391	17,483	8,043	268	13 by 8, f. f., a. l .....	6½*	50 00	Additional trips for portion of the year. In November, 1873.	432
7,618	4,264	12,482	8,027	267	18 by 7, f. f., a. l .....	6	50 00		433
4,525	6,765	11,290	8,013	266	10.6 by 6.11, f. f., d. l .....	12	50 00	In May, 1874 .....	434
17,865	15,645	33,510	7,953	265	10 by 8, f. f., a. l .....	7	50 00		435

E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
436	Conn.	977	915	New Haven, Ansonia.....	New Haven and Derby.....	13.50	29
437	Ind.	12014	22014	Peru, La Porte.....	Chicago, Cincinnati & Louisville	73	30
438	Ala.	6602	.....	Montgomery, Selma.....	Western, of Alabama.....	50	15
439	Pa.	2405	.....	Philadelphia, Norristown...	Philadelphia and Reading.....	16.24	17
440	N. Y.	1454	1248	Utica, Smith's Valley Station	New York and Oswego Midland	31.4	17
441	Pa.	2464	.....	Connellsville, Uniontown...	Pittsburgh and Connellsville....	12	15
442	Ill.	11920	23051	Streator, Pekin.....	Chicago, Pekin and Southwestern	65.2-	29
443	Ky.	9610	20007	Lebanon Junction, Fish Point.	Louisville and Nashville.....	109.9	17
444	Mo.	10509	28009	Centralia, Columbia.....	Saint Louis, Kansas City and Northern.(late North Missouri.)	22	15
445	N. Y.	1545	1231	Cassville Junction, Richfield Springs.	Delaware, Lackawanna & Western.	21	21
446	Pa.	2415	.....	Sunbury, Tomhicken.....	Pennsylvania.....	44.1	20
447	N. Y.	1577	1267	Syracuse, Lacona.....	Syracuse Northern.....	44.92	20
448	Me.	201	11	Belfast, Burnham.....	Maine Central, Belfast division..	34.19	20
449	Iowa	11005a	27015	Des Moines, Indianola.....	Chicago, Rock Island and Pacific	21.4	17
450	N. J.	2119	.....	New York, New Bridge.....	Erie, (late Hackensack & N. York.)	16.5	30
451	N. C.	5216	.....	Raleigh, Sanford.....	Raleigh and Augusta Air-line....	45.72	20
452	Mass.	602	602	Rollingsford, Great Falls...	Boston and Maine.....	3	...
453	N. Y.	1043	1252	Brocton, Corry.....	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Buffalo, Corry and Pittsburgh.)	45.3	20
454	Wis.	13011	25020	Warren, Mineral Point.....	Mineral Point.....	33	14
455	Del.	3403	.....	Clayton, Easton.....	Maryland and Delaware.....	44	20
456	Ill.	11405	23007	Galva, Keithsburg.....	Chicago, Burlington and Quincy..	59.30	22
457	Mass.	742	659	South Framingham, Lowell	Boston, Clinton and Fitchburgh..	29	20
458	Minn.	13840	26003	East Saint Cloud Junction, Melrose.	Saint Paul and Pacific.....	35	14
459	R. I.	821	804	Warren, Fall River.....	Fall River, Warren & Providence	7	24
460	Minn.	13506	26001	Saint Paul, Breckenridge...	Saint Paul and Pacific.....	219.25	17
461	Mich.	12529	24028	Jonesville, Lansing.....	Lake Shore and Michigan Southern.	60.27	20
462	N. J.	2128	.....	Newark, Paterson.....	Erie.....	13.12	30
463	Wis.	13007	25004	Milton Junction, Monroe....	Chicago, Milwaukee and Saint Paul, (late Milwaukee & Saint Paul.)	42.8	15
464	Iowa	11008	27010	Albia, Northwood.....	Central, of Iowa.....	189.2	20
465	Ind.	12012a	22012a	Terre Haute, Rockville....	Logansport, Crawfordsville and Southwestern, (late Evansville and Crawfordsville.)	23	24
466	Mass.	738	657	Winchendon, Peterborough	Monadnock.....	16	24
467	Mich.	12510	24009	Jackson, Roscommon.....	M'chigan Central, lessees Jackson, Lansing and Saginaw.	190.80	14
468	Ind.	12006	22006	Columbus, Madison.....	Jeffersonville, Madison and Indianapolis.	46	1-
469	Tenn.	10123	19016	Nashville, Lebanon.....	Tennessee and Pacific.....	324	15
470	Pa.	2431	.....	Columbia, Sinking Spring...	Reading and Columbia.....	39.7	194
471	Iowa	11011	27029	California Junction, Wisner.	Sioux City and Pacific.....	83.4	15
472	Va.	4404	.....	Alexandria, Hamilton.....	Washington and Ohio.....	45	23
473	Ohio	9024	.....	Fremont, Lima.....	Lake Erie and Louisville.....	62.85	20
474	Conn.	975	913	New Haven, Willimantic...	New Haven, Middletown and Willimantic.	56	20
475	N. H.	308	259	Dover, Alton Bay.....	Boston and Maine.....	22	24
476	Mass.	636	627	Ayer, Lowell.....	Boston and Lowell and Nashua and Lowell.	17	25
477	Mich.	12504	24003	Adrian, Jackson.....	Lake Shore and Michigan Southern.	47.20	20
478	Wis.	13395	25015	Green Bay, Winona.....	Green Bay and Minnesota.....	216.41	20
479	Wis.	13394	25008	Oshkosh, Ripon.....	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	21	20
480	Mass.	615	614	Boston, Mattapan.....	Old Colony and Newport.....	24	1-



are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
5,891	4,089	9,980	7,878	262	No r. a.	12	\$50 00		436
8,075	6,947	15,022	7,730	257	12 by 8, f. f., s. l.	12	50 00		437
5,162	3,826	8,988	7,731	257	18.4 by 8.8, f. f., s. l.	7	50 00		438
4,225	4,002	8,227	7,720	257	No r. a.	12	50 00		439
8,396	5,515	13,931	7,690	256	18.3 by 7.3, f. f., s. l.	6	50 00	In July, 1874.	440
5,520	3,180	8,700	7,681	256	b. c.; no r. a.	12	50 00	Branch; main route \$50, (368.)	441
6,483	6,012	12,495	7,672	255	18 by 9, f. f., s. l.	6	50 00		442
15,296	7,393	22,689	7,638	254	14.10 by 7.6, f. f., s. l.	6	50 00	Main route; branch \$50, (514.)	443
3,926	4,031	7,957	7,487	249	No r. a.	12	50 00		444
8,001	4,167	12,168	7,464	248	19 by 6.7, f. f.; no r. a.	12	50 00		445
4,548	7,464	12,012	7,433	247	8.10 by 5.7, f. f., s. l.	6	50 00		446
9,650	6,756	16,406	7,381	245	9 by 7, f. f., s. l.	12*	50 00		447
4,651	5,192	9,843	7,315	244	12 by —, fixtures, s. l.	12	50 00		448
6,978	3,168	10,146	7,315	243	10 by 6, fixtures, s. l.	6	50 00	Main route; branch \$50, (529.)	449
4,209	3,636	7,845	7,297	243	b. c.; no r. a.	6	50 00		450
7,045	3,470	10,515	7,240	241	11 by 6, f. f., s. l.	6	50 00	Main route; branches \$50 and \$21.	451
4,266	2,909	7,175	7,175	239			50 00	Branch; main route \$150, (82.)	452
8,775	3,436	12,211	7,158	238	8 by 7, f. f., s. l.	18	50 00		453
6,014	2,960	9,004	6,998	233	6 by 4; no r. a.	6	50 00		454
6,091	4,713	10,804	6,964	232	10 by 6, f. f., s. l.	6	50 00		455
7,966	3,808	11,774	4,856	228	10 by 8.6, f. f., s. l.	6	50 00	Branch; main route \$225, (24.)	456
5,299	4,231	9,530	6,831	227	14 by 6.9, f. f., d. l.	12	50 00		457
6,416	3,196	11,612	6,708	223	12.6 by 9, f. f., s. l.	6	50 00		458
4,872	1,701	6,593	6,593	220	No r. a.	6	50 00		459
15,067	7,744	22,811	6,578	219	20 by 7, f. f., s. l.	7*	50 00		460
9,037	3,497	12,594	6,478	215	11.8 by 9, f. f., s. l.	6	50 00		461
6,033	1,820	7,853	6,464	215	b. c.; no r. a.	6	50 00		462
7,187	4,603	11,790	6,429	214	14 by 10.3, f. f., s. l.	6	50 00		463
10,589	17,932	28,521	6,431	214	12.3 by 8.11, f. f., s. l.	6	50 00		464
4,389	3,182	7,571	6,394	213	12.6 by 8, f. f., s. l.	12	50 00		465
5,450	3,941	9,391	6,412	213	5.9 by 3, f. f., s. l.	12	50 00	In June, 1874.	466
15,618	10,724	26,342	6,369	212	14 by 10, f. f. c., s. l.	9½*	50 00		467
7,868	4,261	12,129	6,265	209	10.9 by 6, f. f., s. l.	6	50 00		468
5,150	2,687	7,846	6,253	208	30 by 8, f. f., s. l.	6	50 00		469
8,022	6,686	14,708	6,195	206	6.8 by 6.2 f. f., s. l.	8½*	50 00	Main route; branch \$50, (483.)	470
7,350	4,417	11,767	6,116	204	12 by —, f. f.	6	50 00	Part; residue \$75, (243.) In May, 1874.	471
6,664	3,489	10,153	6,079	203	12 by 6, f. f., s. l.	6	50 00		472
8,658	7,065	15,723	6,002	200	13 by 7, fixtures, s. l.	6	50 00		473
10,149	8,273	18,422	6,011	200	10 by 7, 11.9 by 6.10, f. f., s. l.	8½*	50 00		474
6,506	3,638	10,234	5,912	197	6.8 by 6.7, f. f., s. l.	12	50 00		475
3,916	3,741	7,657	5,879	196	8.5 by 6.8, f. f., s. l.	12	50 00		476
9,003	3,040	12,043	5,901	196	12.9½ by 8.11½, f. f., s. l.	6	50 00		477
12,195	8,679	20,874	5,881	196	12.2 by 7.2½, f. f., s. l.	6	50 00	In June, 1874.	478
3,037	3,506	6,543	5,803	193	22.6 by 10.3, f. f., s. l.	6	50 00		479
3,824	2,651	6,475	5,731	190	b. c.; no r. a.	12	50 00		480

E.—Table showing the weight of the mails, the speed with which they

				Terminal.	Corporate title of company carrying the mail.	Length of route. Miles per hour.
						Miles.
481	Ky ...	9846a	20017	Lexington, Mount Sterling...	Louisville, Cincinnati and Lexington.	33.54 38
482	Pa...	2454	.....	Freeport, Butler .....	Pennsylvania .....	21.3 12
483	Pa...	2431	.....	Junction, Frederick .....	Reading and Columbia.....	7.6 19
484	N. Y..	1589	1284	Cayuga, Ithaca .....	Cayuga Lake .....	32.05 21
485	N. Y..	1580	1285	Dunkirk, Titusville .....	Dunkirk, Allegheny Valley and Pittsburgh	31.16 20
486	Pa...	2437	.....	Altoona, Martinsburgh.....	Pennsylvania.....	22.3 15
487	Mich	12528	24025	Jackson, Niles .....	Michigan Central.....	183 25
488	Mich	12321	24021	Holland, Grand Rapids ...	Chicago and Michigan Lake Shore	25.4 20
489	Conn	945	910	Bethel, Hawleyville .....	Danbury and Norwalk .....	6 2
490	Pa...	2412	.....	Scranton, Carbondale .....	Delaware and Hudson Canal ...	17.11 15
491	N. Y.	1586	1240	Walton, Delhi .....	New York and Oswego Midland	16 17
492	Mich	12520	24020	Lansing, South Bend.....	Chicago and Lake Huron, (late Peninsular.)	122.72 25
493	N. Y..	1540	1235	Summitville, Ellenville.....	New York and Oswego Midland	8 12
494	Wis	13016	25021	Madison, Portage City.....	Chicago and Superior, (late Madison and Portage.)	30.50 15
495	Ohio	9009	.....	Bayard, New Philadelphia ..	Cleveland and Pittsburgh .....	32 15
496	Pa ..	2438	.....	Cresson, Ebensburg.....	Pennsylvania .....	11 11
497	Minn	12512	25002	Saint Paul, Stillwater .....	Lake Superior and Mississippi ..	13.20 20
498	Conn	972	912	Vernon Depot, Rockville....	Hartford, Providence and Fishkill, (late Rockville.)	44 22
499	Ga...	6015	.....	Renwick, Albany .....	Southwestern.....	22 20
500	Nebr	14478	34003	Omaha, Herman .....	Omaha and Northwestern .....	40.2 15
501	N. Y..	1006	1234	Hicksville, Northport .....	Long Island.....	164 20
502	N. Y.	1576	1268	Rondout, Stamford.....	New York, Kingston and Syracuse, (Trustees first-mortgage lands.)	73.3 15
503	Cal ...	14981	46012	Stockton, Milton .....	Stockton and Copperopolis .....	30 2
504	Mass	617	616	Boston, Dedham .....	Boston and Providence .....	11 26
505	Cal	14708	46002	Napa Junction, Calistoga ..	California Pacific .....	36 24
506	Md	3501	.....	Perryville, Port Deposit ...	Philadelphia, Wilmington and Baltimore.	4 22
507	N. Y.	1581	1264	Syracuse, Earlville.....	Syracuse and Chenango.....	42.67 2
508	Pa .	2433	.....	Hanover Junction, Frederick	Hanover Branch.....	52.4 15
509	Ohio.	9036	.....	Means, Cadiz .....	Pittsburgh, Cincinnati and Saint Louis.	8 13
510	Ind ..	12001	22001	Indianapolis, Vincennes....	Indianapolis and Vincennes, operated by the Pennsylvania Company.	116.22 29
511	Cal .	14709	46008	Marysville, Oroville .....	California Northern .....	20 25
512	N. Y.	1544	1241	Cobleskill, Cherry Valley ..	Delaware and Hudson Canal ...	22.47 20
513	N. Y.	.....	1290	Buffalo, Gowanda .....	Buffalo and Jamestown .....	24.25 15
514	Pa	2432	.....	York, Columbia .....	Pennsylvania .....	13.5 14
515	Nebr	14497	34006	Creta, Beatrice .....	Burlington and Missouri River in Nebraska.	31.76 15
516	Mich	12522	24022	Port Huron, Flint .....	Chicago and Lake Huron .....	62 25
517	Mo	10522a	22021	Mexico, Cedar City .....	Chicago and Alton .....	34.67 2
518	Fla ..	6404	.....	Pensacola, Whiting Junction	Pensacola and Louisville .....	44 12
519	Mass	728	652	Wakefield, Newburyport...	Boston and Maine .....	34 24
520	N. J.	2125	.....	Rocky Hill, Monmouth.....	Pennsylvania .....	6 20
521	Ill ..	11916	23026	La Fayette, Bloomington...	Toledo, Wabash and Western ..	116.67 21
522	N. H.	251	253	Franklin, Bristol.....	Northern .....	13 12
523	N. Y.	1562	1272	Canastota, Cazenovia .....	Cazenovia, Canastota and De Ruyter, (late Cazenovia and Canastota.)	15 29
524	Mich	12518	24018	Fort Wayne, Walton .....	Grand Rapids and Indiana.....	221.1 22
525	Cal ...	14981	46012	Peters, Oakdale.....	Stockton and Copperopolis.....	19 2
526	Ala ..	6608	.....	Columbus, Troy.....	Mobile and Girard .....	20 15
527	Md ...	3509	.....	Cambridge, Seaford .....	Dorchester and Delaware.....	21.5 15

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
5,230	2,992	8,222	5,686	189	b. c., not partitioned; f. f., s. l.	12	\$50 00	.....	481
4,609	2,427	7,036	5,672	189	8 by 6, f. f., d. l.	12	50 00	.....	482
1,965	3,907	5,872	5,674	189	No r. a.	12	50 00	Branch; main route \$50. (470.)	483
7,240	4,121	11,361	5,589	186	2.4 by 7, f. f., s. l.	6	50 00	.....	484
7,783	7,912	15,695	5,559	185	10 by 7, f. f., s. l.	6	50 00	.....	485
8,638	5,354	13,992	5,578	185	b. c.; no r. a.	10½*	50 00	Main route; branches \$50. (636, 637.)	486
7,506	7,424	14,990	5,501	183	14 by 10, f. f. c., s. l.	6	50 00	.....	487
5,648	7,365	13,013	10,914	182	12 by 10, s. l.	6	50 00	Branch; main route \$80. (216;) 60 days, in September, 1873, and January, 1874.	488
4,250	1,202	5,452	5,452	181	8 by 6, f. f., s. l.	12	50 00	Branch; main route \$85.11, (201.)	489
3,996	2,106	6,102	5,377	179	6 by 6, f. f., d. l.	12	50 00	.....	490
3,123	3,524	6,647	5,260	175	No apt.	6	50 00	In July, 1874.	491
7,929	9,807	17,735	5,236	174	10 by 6, f. f., s. l.	12½*	50 00	.....	492
3,041	3,007	6,048	5,215	173	No apt.	12	50 00	Branch. In July, 1874.	493
3,710	3,959	7,669	5,172	172	— by —, fixtures, s. l.	6	50 00	.....	494
7,413	4,519	11,932	5,174	172	13 by 9, f. f., s. l.	6	50 00	.....	495
2,617	2,545	5,162	5,162	172	b. c.; no r. a.	12	50 00	.....	496
5,437	2,253	7,690	5,132	171	No r. a.	18	50 00	.....	497
3,444	2,032	5,476	5,012	167	b. c.; no r. a.	18	50 00	.....	498
2,577	3,362	5,939	5,006	166	No apt.; s. l.	10	50 00	Branch; main route \$75. (264,) and branch \$40. (671.)	499
5,554	2,200	7,754	4,961	166	12 by 7, f. f., s. l.	6	50 00	In May, 1874.	500
5,341	2,614	7,955	4,964	165	6 by 4, in b. c.; no r. a.	12	50 00	.....	501
10,838	5,996	16,834	4,933	164	½ car, f. f., s. l.	6	50 00	.....	502
5,543	2,021	7,564	4,928	164	9.10 by 8.10, f. f., s. l. 15 miles, b. c. residue.	7	50 00	Main route; branch \$50. (525.)	503
3,601	2,530	6,131	4,918	164	No apt.	12	50 00	.....	504
5,580	2,762	8,342	4,902	163	8.10 by 7.4, f. f., s. l.	7	50 00	.....	505
1,877	2,992	4,869	4,869	162	No r. a.	6	50 00	Branch; main route \$375. (10.)	506
7,325	4,171	11,496	3,825	161	8 by 8, f. f., s. l.	9*	50 00	.....	507
11,263	9,261	20,524	4,773	159	12 by 6, f. f., d. l. 12½ miles, s. l. residue.	7½*	50 00	.....	508
1,610	3,166	4,776	4,776	159	12 by 8.6, s. l.	12	50 00	Branch; main route \$275. (20.)	509
9,123	5,463	14,586	4,745	158	10 by 6, f. f., s. l.	6	50 00	.....	510
3,853	1,434	5,287	4,715	157	In b. c.; no r. a.	7	50 00	In May, 1874.	511
4,115	3,056	7,171	4,671	155	No r. a.	12	50 00	.....	512
5,875	3,084	8,959	4,633	155	r. a. in b. c.	6	50 00	.....	513
2,643	3,436	6,079	4,676	155	b. c.; no r. a.	6	50 00	.....	514
4,138	2,477	6,615	4,665	155	6.6 by 5.8, f. f., s. l.	6	50 00	.....	515
4,370	4,591	9,561	4,605	153	10 by 7, f. f., s. l.	6	50 00	.....	516
3,901	4,542	8,449	4,568	152	17 by 10, s. l.	6	50 00	In May, 1874.	517
1,664	3,080	4,744	4,574	152	6.9 by 4.10, f. f., s. l.	7	50 00	.....	518
7,375	5,333	12,708	4,567	152	b. c.; no r. a.	12	50 00	.....	519
2,647	1,861	4,508	4,508	150	11 by 8.5; no r. a.	6	50 00	.....	520
10,505	9,520	20,115	4,492	149	12 by —, f. f., s. l.	6	50 00	.....	521
3,136	2,166	5,302	4,440	148	b. c.; no r. a.	6	50 00	Branch; main route \$140. (103.)	522
3,334	1,821	5,155	4,443	148	Box in b. c. 2.6 by 2.6, locked; no r. a.	18	50 00	.....	523
35,462	21,097	56,559	4,388	146	14 by 7, f. f., s. l.	7½*	50 00	.....	524
3,593	1,255	4,848	4,385	146	9.10 by 8.10, f. f., s. l.	7	50 00	Branch; main route \$50. (503.)	525
5,462	3,707	9,169	4,298	143	12 by 6.6, f. f., s. l.	6	50 00	.....	526
3,117	4,801	7,918	4,279	142	20 by 9.8, f. f., s. l.	6	50 00	.....	527

## E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Miles per hour.
						Miles.	
528	Kans.	14235	33010	Leavenworth, Holton .....	Kansas Central.....	55.62	1
529	Iowa..	11005a	27015	Summerset Junc., Winterset .....	Chicago, Rock Island and Pacific .....	27.1	1
530	Mich.	12522	24022	Port Huron, Flint.....	Chicago and Lake Huron.....	68	5
531	Pa.....	2450	.....	Lewistown Junction, Milroy.....	Pennsylvania .....	12.5	1
532	Mo....	10521a	28021	Pierce City, Smithfield.....	Memphis, Carthage & Northwestern .....	45.31	1
533	Ill....	11903	23025	Maysville, Pittsfield .....	Toledo, Wabash and Western.....	6	1
534	Pa.....	2446	.....	Oil City, Ashtabula .....	Lake Shore & Michigan Southern .....	87.29	5
535	N. Y..	1007	1232	Mincola, Locust Valley .....	Long Island.....	12½	1
536	Mich.	12519	24019	Kalamazoo, South Haven .....	Michigan Central .....	39.51	5
537	Pa.....	2448	.....	Downingtown, Honey Brook .....	Pennsylvania .....	16	1
538	Mass.	610	610	Boston, Medford .....	Boston and Maine .....	54	3
539	N. Y..	1010	1204	Vail's Gate, Junction.....	Erie .....	12.75	1
540	S. C....	5707	.....	Augusta, Port Royal.....	Port Royal.....	112.2	1
541	Md....	3515	.....	Bowie, Pope's Creek .....	Baltimore and Potomac .....	47.6	1
542	Ill....	11907	23034	Springfield, Gilman.....	Gilman, Clinton and Springfield..	111.00	1
543	Ind....	12025	22025	La Porte, Michigan City....	Indianapolis, Peru and Chicago..	12.36	5
544	Ky....	9610	20007	Richmond Junc., Richmond.	Louisville and Nashville .....	31.8	1
545	Ky....	9742	20012	Glasgow Junction, Glasgow .....	..... do .....	12	1
546	N. Y..	1564	1270	Port Jervis, Monticello.....	Monticello and Port Jervis.....	24	1
547	Mo....	10514	28013	Brunswick, Pattonsburgh...	Brunswick and Chillicothe and Saint Louis, Council Bluffs and Omaha.	80.05	1
548	N. H..	299	258	Contoocook Village, Hillsborough Bridge.	Contoocook River.....	15	1
549	Ind....	12016	22016	Bradford, Logansport.....	Pittsburgh, Cincinnati & St. Louis .....	114.6	1
550	N. Y..	1009	1202	Sufferns, Piermont .....	Erie .....	18	1
551	Mass.	631	624	Winchester, Woburn .....	Boston and Lowell and Nashua and Lowell.	3	1
552	Pa.....	2472	.....	Shaff's Bridge, Somerset....	Somerset and Mineral Point.....	9.1	1
553	N. C....	5280	.....	Greensborough, Salem .....	Northwestern North Carolina....	29.31	1
554	N. Y..	1579	1266	Ithaca, State Line .....	Ithaca and Athens.....	34.6	5
555	Ky....	9612	20009	Paducah, Troy Station.....	Paducah and Memphis, (late Paducah and Gulf.)	62	1
556	Mich.	12523	24023	Monteith, Muskegon.....	Michigan Lake Shore .....	62½	1
557	Ill....	11405	23007	Aurora, Galena Junction....	Chicago, Burlington and Quincy..	13	1
558	La....	8080	.....	New Orleans, Donaldsonville .....	New Orleans, Mobile and Texas .....	61.66	1
559	Del....	3404	.....	Harrington, Lewes.....	Junction and Breakwater .....	40	1
560	Pa.....	2474	.....	Marion Junction, Richmond .....	Cumberland Valley .....	21½	1
561	Md....	3512	.....	Cumberland, Piedmont .....	Cumberland and Pennsylvania....	34	1
562	N. Y..	1587	1262	East Gainsville, Perry.....	Rochester and Pine Creek .....	6.55	5
563	Mass.	632	625	Porter's Station, Lexington.	Boston and Lowell and Nashua and Lowell, (late Lexington and Arlington.)	8	1
564	N. J..	2117	.....	Lambertville, Flemington...	Pennsylvania .....	12.13	1
565	Minn.	13514	26010	Hastings, Glencoe .....	Chicago, Milwaukee & St. Paul, (late Milwaukee & St. Paul.)	74.20	1
566	Ohio..	9045	.....	Black River, Uhricksville .....	Lake Shore & Tuscarawas Valley .....	102.45	1
567	N. H..	269	256	Manchester, North Weare...	Concord .....	204	1
568	Mich.	12513	24012	Ridgeway, Romeo.....	Saint Clair and Chicago Air-Line .....	14.6	5
569	Ala....	6606	.....	Marion Junc., Sawyerville..	Selma, Marion and Memphis.....	45.12	1
570	Conn.	980	916	Hartford, Millerton .....	Connecticut Western .....	62.1	1
571	N. Y..	1541	1277	Newburgh, Millerton .....	Dutchess and Columbia.....	56.5	1
572	Minn.	13841	26011	Winona, La Crescent .....	Chicago, Milwaukee & St. Paul, (late Milwaukee & St. Paul.)	25	1
573	Iowa..	11003	27006	Chariton, Leon.....	Burlington and Missouri River..	7.44	1
574	Md....	3511	.....	Townsend, Centreville.....	Queen Anne and Kent .....	36	1
575	Iowa..	11017b	27013	Stamwood, Tipton .....	Chicago and Northwestern.....	2.21	1
576	S. C..	5605	.....	Kingsville, Camden.....	South Carolina.....	72.30	1
577	Ill....	11411	23027	La Harpe, Burlington.....	Toledo, Peoria and Warsaw.....	134	5
578	Mass.	676	640	Taunton, Middleborough....	Middleborough and Taunton.....	94	1
579	Ohio..	9041	.....	Niles, New Lisbon.....	Atlantic and Great Western.....	31.24	1
580	Mass.	733	655	Palmer, Winchendon.....	Boston and Albany .....	62	1
581	Mass.	616	615	Boston, West Lynn Depot ..	Eastern.....	10	1

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
5,827	2,876	8,703	4,274		142 7.6 by 5, f. f., s. l.	6	\$50 00		528
3,874	1,850	5,754	4,483		142 10 by 6, f. f., s. l.	6	50 00	Branch; main route \$50, (449.)	529
6,138	4,676	10,814	4,233		141 9 by 7, f. f., s. l.	6	50 00		530
2,348	3,608	5,956	4,206		140 b. c.; no r. a.	12	50 00		531
6,591	3,240	9,741	4,054		135 13 by 7, f. f., s. l.	7	50 00	In May, 1874.	532
1,368	2,687	4,055	4,055		135 12 by —, f. f.	6	50 00	Branch; main route \$50, (365.)	533
6,277	9,807	16,084	4,022		134 18 by 9, f. f., s. l.	6	50 00		534
3,854	2,114	5,968	3,960		132 4 by 4, in b. c.; no r. a.	6	50 00		535
3,882	1,941	5,823	3,982		132 r. a. in b. c., s. l.	6	50 00		536
3,346	2,226	5,572	3,981		132 b. c.; no r. a.	6	50 00		537
2,475	1,500	3,975	3,975		132 .....do	12	50 00		538
2,805	4,914	7,719	3,888		130 .....do	12	50 00	Branch; main route \$50, (393.)	539
6,203	4,437	10,740	3,898		129 10 by 8, f. f., s. l.	6	50 00		540
			3,836		128 9.3 by 8.6, f. f., s. l.	6	50 00		541
5,817	7,278	13,095	3,800		126 17.11 by 7.5, fixtures, s. l.	6	50 00		542
1,649	2,131	3,780	3,780		126 12 by 8, f. f., s. l.	12	50 00		543
3,816	2,693	6,509	3,771		125 14.10 by 7.6, f. f., s. l.	6	50 00	Branch; main route \$50, (443.)	544
2,543	1,162	3,705	3,705		123 No r. a.	6	50 00		545
4,027	3,279	7,306	3,653		122 17.4 by 9.10; no r. a.	6	50 00		546
6,950	4,734	11,684	3,687		122 21 by 7.6, f. f.; no r. a.	6	50 00		547
3,014	1,568	4,582	3,664		122 9 by 3, f. f., s. l.	12	50 00		548
9,479	7,721	17,200	3,652		121 12 by 8.6, f. f., s. l.	6	50 00		549
3,022	2,493	5,515	3,528		120 b. c.; no r. a.	6	50 00		550
1,915	1,662	3,577	3,577		119 36 cubic feet; no r. a.	12	50 00		551
1,758	1,920	3,678	3,552		119 21 by 6, furniture; no r. a.	12	50 00		552
3,043	1,552	4,595	3,575		119 21 by 8, f. f., s. l.	6	50 00		553
3,935	3,924	7,859	3,549		118 12 by 7, f. f., s. l.	6	50 00		554
6,203	5,440	11,643	3,558		118 9 by 7, f. f., s. l.	6	50 00		555
4,544	3,472	8,016	3,472		115 10 by 8, f. f., s. l.	6	50 00		556
3,113	1,846	4,959	3,432		114 No r. a.	10½	50 00	Branch; main route \$225, (24.)	557
1,895	1,157	3,052	3,052		113 17 by 7, f. f., s. l.	7	50 00	27 days	558
3,216	1,888	5,124	3,370		112 10 by 8, f. f., s. l.	6	50 00		559
3,765	1,590	5,355	3,357		111 10 by 5, fixtures, s. l.	6	50 00		560
3,733	3,394	7,127	3,306		110 10.6 by 8.9, f. f., s. l.	6	50 00		561
2,043	1,202	3,251	3,251		108 No r. a.	12	50 00		562
3,456	2,342	5,834	3,208		107 36 cubic feet.	12	50 00		563
2,073	2,382	4,464	3,216		107 No r. a.	12	50 00		564
6,172	3,630	9,808	3,182		101 23 by 10, f. f., s. l.	6	50 00		565
9,928	8,556	18,484	2,767		106 14 by 7, fixtures, s. l.	7½	50 00	26 days	566
3,383	1,756	5,139	3,151		105 b. c.; no r. a.	12	50 00		567
3,067	603	3,670	3,140		105 Express car; no r. a.	6	50 00		568
2,002	3,431	5,433	3,032		101 14 by 6.6, f. f., s. l.	6	50 00		569
7,891	7,055	14,856	3,040		101 12 by 6.6, f. f., s. l.	9½	50 00		570
0,194	5,481	15,675	3,012		101 10 by 6.8, f. f., s. l.	6	50 00	Main route; branch \$50, (639.)	571
2,537	1,792	4,329	3,025		100 23 by 10, f. f., s. l.	6	50 00		572
2,922	1,357	4,279	3,025		100 9 by 6, f. f., s. l.	6	50 00		573
3,055	2,596	7,651	2,994		100 10 by 5, f. f., s. l.	6	50 00		574
1,779	1,243	3,022	3,022		100 No r. a.	6	50 00		575
2,373	1,724	4,097	2,984		99 16.2 by 8.2, f. f.; no r. a.	6	50 00	Branch; main route \$125, (123.)	576
1,729	1,603	3,332	2,975		99 18.9 by 6.7½, f. f. c., s. l.	6	50 00	Branch; main route \$60, (307.) In June, 1874.	577
1,765	1,690	3,455	2,964		98 No apt; no r. a.	30	50 00		578
5,840	4,113	9,993	2,930		97 12.6 by 8, f. f., s. l.	6	50 00		579
6,227	3,707	9,934	2,929		97 7.10 by 3, s. l.	16½	50 00		580
2,112	1,422	3,600	2,867		95 No r. a.	12	50 00		581

E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.			
542	Iowa	11020a	27023	Boulab, Elkader	Iowa Eastern	17 35 10
543	Mass	635	626	South Acton Depot, Hudson	Pittsburgh	9 2
544	Pa	2451	.....	Pottsville, Frackville	Philadelphia and Reading	11 51 10
545	Ohio	2048	.....	Harbor, Youngstown	Pennsylvania Company	62 1 20
546	Ga	6013	.....	Gordon, Milledgeville	Central Railroad and Banking Co	1 1 15
547	Ga	6014	.....	Easton, Milledgeville	do	20 1
548	Pa	2484	.....	Lawrenceville, Elkland	Fall Brook Coal Company	13 0 12
549	Mass	727	651	Gloucester, Pigton Cove	Eastern	6 1 21
550	Mass	629	623	Lowell, Lawrence	Boston and Lowell and Nashua and Lowell	14 2
551	Ind	12030a	22031	Evansville, Boonville	Lake Erie, Evansville and South eastern	16 2
552	Miss	13837	20007	White Bear Lake, Sioux City Junction	Lake Superior and Mississippi	41 1
553	Pa	2467	.....	Phoenixville, Eagle	Philadelphia and Reading	11 12 17
554	N. Y	.....	1220	Freeville, Scipio	Utica, Ithaca and Elmira	2 1 2
555	Ill	11408	23004	Elgin, Geneva	Chicago and Northwestern	44 24
556	Mass	620	619	Salem, Marblehead	Eastern	4
557	Wis	11015	25021	Calumet, Platteville	Mineral Point	1 1 20 4
558	Colo	17038	30004	Golden Junction, Longmont	Colorado Central	39 2
559	Mass	746	601	Holyoke, Westfield	New Haven and Northampton	10 23 2
560	N. Y	1589	1232	Norwich, Cortland Village	New York and Oswego Midland	49 21
561	Pa	2464	.....	Broad Top, Mount Pleasant	Pittsburgh and Connellsville	9 2
562	Wis	13019	25022	Tomah, Grand Rapids	Wisconsin Valley	4 2 2
563	N. J	2130	.....	New Bridge, Nanuet Junction	Erie	11 2 1
564	Pa	2465	.....	Carbondale, Susquehanna Depot	do	3 2 1
565	Ind	12021	22021	Marion, Goshen	Cincinnati, Wabash and Michigan	22 2
566	Mo	10516a	22016	Alexandria, Centerville	Missouri, Iowa and Nebraska	10 2
567	Pa	2463	.....	Topton, Kutztown	Philadelphia and Reading	4 3 2
568	Mass	630	633	Canton, Stoughton	Boston and Providence, (late Stoughton Branch)	4 2
569	N. Y	1590	1235	Sodus Point, Gorham Station	Sodus Point and Southern	34
570	N. J	2115	.....	Greensburg Station, Pennington	Pennsylvania	1 6 2
571	N. Y	1593	1238	Carthage, Theresa	Utica and Black River	20 5 2
572	N. Y	1546	1236	Sidney Plains, New Berlin	New York and Oswego Midland	24 4 2
573	Mo	10502	22002	Mineral Point, Potosi	Saint Louis and Iron Mountain and Cairo and Fulton	4
574	N. Y	1592	1237	Oswego, Sodus	Lake Ontario Shore	40 1 2
575	La	6018	.....	Terrebonne, Houma	Morgan's Louisiana and Texas	15 2
576	Ala	6021	.....	Kufaula, Clayton	Vicksburg and Brunswick	22 5
577	Ala	6019	.....	Chehaw, Tuskegee	Tuskegee	6
578	N. Y	.....	1232	Crawford Junction, Pine Bush	New York and Oswego Midland	10 1
579	Mass	749	736	Milford, Ashland	Hopkinton	11 6
580	Ill	11434	23019	Washington, Dwight	Chicago and Alton	40 21 2
581	Mass	638	629	Anbursdale, Newton Lower Falls	Boston and Albany	2
582	Pa	2423	.....	Sunbury, Mount Carmel	Northern Central	20 2
583	Mass	742	662	Milford, Bellingham Junction	Providence and Worcester	5 2
584	Va	4403	.....	Owl Run, Warrenton	Washington City, Virginia Midland and Great Southern, (late Orange, Alexandria and Manassas)	9 2
585	Mass	621	620	Salem, Lawrence	Eastern	93 2
586	Cal	14877	40015	Elmira, Vacaville	Vaca Valley	4 2
587	Mass	630	630	Natick, Saxtonville	Boston and Albany	4 2
588	Ill	11909	23046	Jacksonville, Virden	Jacksonville, Northwestern and Southeastern	31 2 1
589	Mid	3516	.....	Newtown Junction, Newtown	Worcester and Somerset	9 2
590	N. J	2114	.....	Mount Holly, Medford	Pennsylvania	4 2
591	Ill	11424	23019	Varna, Lacon	Chicago and Alton	11 2 2
592	N. J	2109	.....	Pemberton Junction, Hightstown	Pennsylvania	2 5 2
593	N. J	2109	.....	Mount Holly, Burlington	do	7 2
594	Mich	12228	22027	Niles, South Bend	Michigan Central	12 2 2
595	N. Y	1525	1239	Clinton, Rome	New York and Oswego Midland	12 2 1



are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
2,309	1,290	3,599	2,855		95 18 by 7, f. f., s. l . . . . .	6	\$50 00		582
2,521	1,478	4,001	2,802		93 No apt.; no r. a . . . . .	12	50 00		583
3,453	2,621	6,074	2,801		93 No r. a . . . . .	10½	50 00		584
5,542	5,698	11,246	2,721		90 9.4 by 6.6, f. f., s. l . . . . .	6	50 00		585
1,623	1,237	2,860	2,706		90 8.2 by 7, f. f., s. l . . . . .	6	50 00		586
821	1,848	2,729	2,729		90 8.2 by 7, f. f., s. l . . . . .	6	50 00		587
2,124	1,147	3,271	2,677		89 11 by 7.6, f. f., s. l . . . . .	12	50 00	In May, 1874. . . . .	588
2,601	1,715	4,316	2,623		87 No r. a . . . . .	12	50 00		589
1,780	1,130	2,910	2,556		85 36 cubic feet; no r. a . . . . .	12	50 00		590
1,944	682	2,632	2,544		85 Locked chest in b. c . . . . .	6	50 00	In July, 1874. . . . .	591
2,654	4,406	7,060	2,520		84 30 by 10, f. f . . . . .	6	50 00		592
2,200	1,438	3,638	2,545		84 No r. a . . . . .	6	50 00		593
2,676	1,557	4,233	2,534		83 10.6 by 6.11, f. f., s. l . . . . .	6	50 00	In May, 1874. . . . .	594
4,972	3,382	8,354	2,496		83 9.6 by 9.6, f. f., s. l . . . . .	6	50 00		595
1,656	843	2,499	2,499		83 No r. a . . . . .	15+	50 00		596
1,250	1,739	2,989	2,475		82 6 by 4, no r. a . . . . .	6	50 00		597
2,774	738	3,512	2,469		82 No apt . . . . .	6	50 00	Branch; main route \$50, (421.) . . . . .	598
1,439	982	2,421	2,421		80 12 by 10, f. f., d. l . . . . .	12	50 00		599
4,026	3,078	7,104	2,418		80 18.3 by 7.3, f. f., s. l . . . . .	6	50 00	In July, 1874. . . . .	600
2,440	1,486	3,926	2,376		79 b. c.; no r. a . . . . .	12	50 00	Branch; main route \$50, (362.) . . . . .	601
1,724	1,323	3,047	2,384		79 11 by 9, f. f., s. l . . . . .	6	50 00	In May, 1874. . . . .	602
2,289	2,104	4,393	2,212		74 b. c.; no r. a . . . . .	6	50 00		603
2,360	1,907	4,267	2,132		71 9 by 8, f. f. c., s. l . . . . .	6	50 00		604
4,799	5,323	10,122	2,138		71 11.5 by 6.9, s. l . . . . .	6	50 00	In June, 1874. . . . .	605
3,879	4,220	8,079	2,060		68 12.6 by 8.6, f. f., s. l . . . . .	6	50 00		606
949	1,114	2,060	2,060		68 No r. a . . . . .	9+	50 00		607
1,246	742	2,028	2,028		67 No apt . . . . .	12	50 00		608
2,716	4,426	7,142	1,970		65 7.6 by 7, f. f., s. l . . . . .	6	50 00		609
1,173	752	1,925	1,925		64 No r. a . . . . .	12	50 00		610
2,464	1,625	4,089	1,867		62 . . . . . do . . . . .	11+	50 00		611
2,707	1,944	4,651	1,807		60 8.9 by 6.1, f. f., s. l . . . . .	6	50 00	In July, 1874. . . . .	612
1,030	782	1,818	1,818		60 No r. a . . . . .	6	50 00	Branch; main route \$100, (167.) . . . . .	613
4,875	2,348	7,223	1,751		58 7 by 6, f. f., s. l . . . . .	6	50 00		614
1,164	693	1,857	1,709		56 No apt.; s. l . . . . .	6	50 00		615
2,036	1,340	3,376	1,688		56 No r. a . . . . .	6	50 00		616
1,041	575	1,666	1,666		55 . . . . . do . . . . .	12	50 00		617
1,592	805	2,397	1,617		53 No apt . . . . .	6	50 00	In July, 1874. . . . .	618
1,470	2,194	3,664	1,579		52 . . . . .	6	50 00		619
2,894	4,063	6,957	1,586		52 17 by 10, s. l . . . . .	6	50 00	Main route; branch \$50, (631.) In May, 1874. . . . .	620
862	712	1,574	1,574		52 No apt . . . . .	12	50 00		621
1,851	1,086	2,937	1,525		50 8.10 by 5.7, f. f., s. l . . . . .	10+	50 00		622
672	796	1,468	1,468		49 No r. a . . . . .	12	50 00		623
966	662	1,634	1,444		48 Locked room in b. c.; no r. a . . . . .	6	50 00	Branch; main route \$225, (25.) . . . . .	624
3,527	2,569	6,116	1,459		48 No r. a . . . . .	8½	50 00		625
822	497	1,385	1,385		46 No apt.; no r. a . . . . .	12	50 00		626
820	488	1,348	1,348		44 No apt . . . . .	12	50 00		627
1,900	1,416	3,316	1,304		43 5.6 by 3.3, f. f., s. l . . . . .	6	50 00	In May, 1874. . . . .	628
767	364	1,131	1,131		37 No apt . . . . .	6	50 00	In August, 1874 . . . . .	629
785	894	1,679	1,278		42 8 by 6.6, fixtures; no r. a . . . . .	12	50 00		630
626	495	1,121	1,121		37 17 by 10, s. l . . . . .	6	50 00	Branch; main route \$50, (620.) In May, 1874. . . . .	631
			1,044		35 8 by 6.6, fixtures, s. l . . . . .	6	50 00	Part; residue \$75, (262.) . . . . .	632
662	399	1,061	1,061		35 8 by 6.6, fixtures . . . . .	12	50 00	Branch; main route \$75, (262.) . . . . .	633
610	778	1,388	1,042		35 No r. a . . . . .	6	50 00		634
273	586	1,409	1,060		35 18.3 by 7.3; no r. a . . . . .	6	50 00	In July, 1874 . . . . .	635

E.—Table showing the weight of the mails, the speed with which they

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route. Miles.	Speed per hour.
636	Pa.....	2437	.....	Duncansville, Newry .....	Pennsylvania .....	3	19
637	Pa.....	2437	.....	Martinsburgh, Henrietta.....	.....do .....	6.7	15
638	N. J. ..	2131	.....	Kinkora Junction, New Lisbon.	.....do .....	14.41	25
639	N. Y. ..	1541	1277	Clove Branch Junction, Sylvan Lake.	Dutchess and Columbia.....	4.5	23
640	Mass ..	622	621	Georgetown, Haverhill.....	Boston and Maine.....	64	30
641	Va.....	4411	.....	Petersburgh, City Point .....	Atlantic, Mississippi and Ohio...	12	
642	Ark ..	7525a	.....	Chicot, Pine Bluff.....	Texas, Mississippi River and Northwestern, (late Little Rock, Pine Bluff and New Orleans.)	72.75	12
643	Ind ....	12015	22015	Fairland, Martinsville .....	Cincinnati and Martinsville.....	324	15
644	Ark ....	7502	.....	Helena, Clarendon .....	Arkansas Central.....	48.02	25
645	N. Y. ..	1518	1280	Plattsburgh, An Sable Forks	Whitehall and Plattsburgh .....	23	22
646	Ohio ..	9010	.....	Oneida Mills, Carrollton .....	Carrollton and Oneida .....	12	
647	Ill ....	11917	23037	Vincennes, Cairo.....	Cairo and Vincennes .....	1564	25
648	Ind ....	12020	22020	Richmond, Fort Wayne.....	Cincinnati, Richmond and Fort Wayne.	91.5	22
649	Ind ....	12027	22027	Rockville, Logansport .....	Logansport, Crawfordsville and Southwestern.	92.1	20
650	Ill ....	11911	23047	Chester, Tamaroa.....	Chester and Tamaroa Coal and Railroad Company.	42	15
651	Pa.....	2428	.....	Harrisburgh, Auburn.....	Philadelphia and Reading.....	53.3	25
652	Iowa..	11012b	27002	Cedar Rapids, Postville.....	Burlington, Cedar Rapids and Minnesota.	92.2	14
653	Iowa..	11003	27009	Villisca, Clarinda.....	Burlington and Missouri River ..	16	14
654	Pa.....	2411	.....	Penn Haven Junction, Mount Carmel.	Lehigh Valley .....	50	20
655	Tenn ..	10004	19004	Wartrace Depot, Shelbyville	Nashville, Chattanooga and Saint Louis.	8	15
656	Ill ....	11900	23032	McLeansborough, Shawneetown.	Saint Louis and Southeastern, Consolidated.	414	12
657	Ill ....	11427	23024	Pekin, Decatur .....	Toledo, Wabash and Western.....	62.46	22
658	Ill ....	11919	23014	Rock Falls, Shabbona .....	Chicago, Burlington and Quincy.	47.21	25
659	Wis ..	13010	25007	Nepeuskun, Winneconne ..	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	16.25	22
660	S. C. ..	5610	.....	Alston, Spartanburgh C. H. ..	Spartanburgh and Union.....	624	15
661	Pa.....	2455	.....	Wilmington, Birdsborough..	Wilmington and Reading .....	62.6	15
662	Iowa..	11005b	27016	Washington, Sigourney.....	Chicago, Rock Island and Pacific	29	14
663	Ill ....	11902	23013	Mendota, Clinton.....	Chicago, Burlington and Quincy ..	64.19	22
664	Mich ..	12525	24024	Ypsilanti, Bankers.....	Detroit, Hillsdale and Indiana...	62.40	22
665	Tenn ..	10005	19005	Fayetteville, Decherd.....	Southern Railway Security Co. ...	40	14
666	Pa.....	2457	.....	Perkiomen Junction, Green Lane.	Philadelphia and Reading.....	17.92	22
667	Ill ....	11421	23039	Carbondale, Grand Tower...	Grand Tower Mining, Manufacturing, and Transportation Co.	25	15
668	Pa.....	2468	.....	Lewisburgh, Mifflinburgh ..	Pennsylvania .....	10.7	14
669	Pa.....	2462	.....	Schnylkill, Glen Carbon .....	Philadelphia and Reading .....	13.2	15
670	Mich ..	12949	24030	East Saginaw, Saint Louis..	Saginaw Valley and Saint Louis ..	35.2	25
671	Ga.....	6015	.....	Cuthbert, Fort Gaines .....	Southwestern .....	24	15
672	Wis ..	13020	25018	Manitowoc, Appleton.....	Milwaukee, Lake Shore and Western.	444	15
673	Pa.....	2458	.....	Pottstown, Colebrookdale...	Philadelphia and Reading.....	13.05	12
674	Mich ..	12954	24033	Ionia, Stanton .....	Detroit, Lansing and Lake Michigan.	25.3	25
675	Ohio ..	9040	.....	Logan, New Straitsville .....	Columbus and Hocking Valley...	13.2	22
676	Pa.....	2469	.....	Lewistown Junc., Sunbury ..	Pennsylvania .....	45	22
677	Ill ....	11914	23048	Paris, Decatur .....	Paris and Decatur .....	76.03	22
678	Wis ..	13018	25017	Stevens' Point, Colby.....	Wisconsin Central, operated by Phillips & Colby Construction Company.	42.55	22
679	Pa.....	2470	.....	Union City, Titusville .....	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	14.1	15
680	Tenn ..	10015	19014	Memphis, Covington.....	Paducah and Memphis.....	25.31	22

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
936	624	1,560	1,034	34	b. c.; no r. a .....	6	\$50 00	Branch; main route \$50, (486.)	636
487	452	939	939	31	.....do .....	6	50 00	Branch; main route \$50, (486.)	637
1,095	1,048	2,143	939	31	No apt .....	12	50 00	.....	638
411	197	608	608	20	No r. a .....	6	50 00	Branch; main route \$50, (571.)	639
360	311	611	611	20	b. c.; no r. a .....	12	50 00	.....	640
308	184	492	492	16	No r. a .....	6	50 00	.....	641
4,079	4,431	8,510	8,060	268	5 by 4.6, $\frac{1}{2}$ -line .....	3	45 00	.....	642
4,951	3,173	8,124	3,029	100	11.3 by 6.10, f. f., a. l. ....	6	45 00	In June, 1874 .....	643
1,770	1,275	3,045	1,930	64	10 by 8, f. f., a. l. ....	6	45 00	.....	644
3,585	1,960	5,545	4,197	140	No apt.; no r. a .....	6	43 47	.....	645
1,530	1,020	2,550	2,550	85	.....	6	41 66	.....	646
14,016	13,848	27,864	14,027	467	10 by 6, f. f., a. l. ....	6	40 00	.....	647
5,349	6,822	15,171	6,405	213	14 by 7, a. l. ....	6	40 00	.....	648
6,677	8,755	15,432	5,782	192	10 by 8, f. f., a. l. ....	6	40 00	.....	649
3,745	5,441	9,187	5,552	185	9.5 by 6.6, f. f., a. l. ....	6	40 00	In May, 1874 .....	650
4,668	5,418	10,086	5,375	179	7.9 by 3.7, f. f., a. l. ....	7 $\frac{1}{2}$ *	40 00	.....	651
6,299	6,310	12,609	4,886	162	9.11 by 7.7, f. f., a. l. ....	6	40 00	.....	652
2,657	1,898	4,585	4,585	152	No r. a .....	12	40 00	.....	653
6,338	2,807	9,145	4,281	142	10 by 7, f. f., a. l. ....	9 $\frac{1}{2}$ *	40 00	.....	654
1,404	2,874	4,278	4,278	142	No r. a .....	6	40 00	Branch; main route \$200, (38;) \$150, (91.)	655
4,527	3,412	7,939	4,079	135	12 by 6.6, f. f., a. l. ....	6	40 00	Branch; main route \$90, (195.)	656
5,352	5,646	11,004	4,035	134	12 by —, f. f., a. l. ....	6	40 00	.....	657
3,608	3,382	6,990	3,921	131	7 by 6.6, f. f., a. l. ....	6	40 00	.....	658
2,957	3,084	6,041	3,907	130	No r. a .....	6	40 00	.....	659
4,721	2,883	7,604	3,576	119	7.1 by 6.5, f. f., a. l. ....	6	40 00	.....	660
5,919	4,536	10,455	3,362	112	7.6 by 7, f. f., a. l. ....	6	40 00	.....	661
3,353	1,587	4,940	3,273	108	8 by 6.4, f. f., a. l. ....	6	40 00	.....	662
4,508	2,806	7,314	3,079	103	9 by 7, f. f., a. l. ....	6	40 00	.....	663
5,811	3,275	9,086	2,971	99	7.6 by 5.6, f. f., a. l. ....	6	40 00	.....	664
2,754	2,497	5,251	2,955	98	8.3 by 8, f. f., a. l. ....	6	40 00	In June, 1874 .....	665
3,435	2,061	5,496	2,884	96	b. c.; no r. a .....	6 $\frac{1}{2}$ *	40 00	.....	666
2,585	1,795	4,380	2,878	95	No apt .....	9*	40 00	.....	667
1,924	1,151	3,079	2,689	89	No r. a .....	6	40 00	.....	668
2,405	1,765	4,173	2,532	84	.....do .....	6	40 00	.....	669
2,072	1,171	3,243	2,519	81	No apt.; no r. a .....	9*	40 00	.....	670
1,825	826	2,711	2,405	80	No apt .....	6	40 00	Branch; main route \$75, (264.)	671
2,175	1,864	4,039	2,370	78	.....do .....	6	40 00	Branch; main route \$67, (290.) In June, 1874.	672
2,275	1,579	3,854	2,230	74	No r. a .....	6	40 00	.....	673
1,692	1,021	2,713	2,111	70	No apt.; no r. a .....	6	40 00	.....	674
1,591	1,090	2,681	2,087	69	14 by 10, f. f., a. l. ....	12	40 00	Branch; main route \$75, (240.)	675
4,609	2,889	7,498	2,044	68	10.9 by 8, f. f., a. l. ....	6	40 00	.....	676
2,964	3,363	6,327	1,992	66	11.6 by 6.6, f. f. c., a. l. ....	6	40 00	.....	677
.....	.....	.....	1,926	63	14.2 by 7.10, f. f.; r. a. 63 m.; apt. through whole length of route.	6	40 00	Part; residue \$70, (304.) In May, 1874.	678
1,639	2,233	3,872	1,924	63	9 by 7, f. f., a. l. ....	6	40 00	.....	679
1,737	1,494	3,231	1,882	62	4 by 3.6, a. l. ....	6	40 00	.....	680

E.—Table showing the weight of the mails, the speed with which they

				Corporate title of company carrying the mail.	Length of route.	Miles per hour	
					Miles.		
				Carbondale and Shawneetown....	18	1-	
				Atlantic, Tennessee and Ohio...	42.46	15	
				Macon and Western .....	17½	14	
				Chicago and Illinois Southern, consolidated.	31.66	15	
				Erie .....	25.5	3-	
				Wilmington and Western .....	19.33	16	
				Jeffersonville, Madison and Indianapolis.	65	2-	
				Erie, (late Towanda Coal Co) ...	12	3-	
				Burlington, Cedar Rapids and Minnesota.	24.77	15	
				Pennsylvania, (late Pennsylvania and Delaware.)	38.38	11	
				Erie .....	16.25	3-	
				Old Colony and Newport .....	1.75	2-	
				Joseph Crows, (contractor) .....	31.52	4	
				Cincinnati and Terre Haute .....	26.15	19	
				Louisville and Nashville .....	17.3	1-	
696	Mo	105152	28014	Hannibal, Sedalia .....	Missouri, Kansas and Texas ..	142.86	2-
697	Ill	11434	23042	Chicago, Danville .....	Chicago, Danville and Vincennes	109	1-
698	Iowa	11019	27008	Vieno, Unionville .....	Burlington and Southwestern....	101.75	2-
699	N. H.	342	262	Hookset, Pittsfield .....	Suncook Valley .....	29	2-
700	Ky	9842	20015	Owensborough, Owensborough Junction.	Evansville, Owensborough and Nashville.	36.13	15
701	Mich	12327	24026	Grand Rapids, Newaygo ....	Grand Rapids, Newaygo and Lake Shore.	36.40	1-
702	Iowa	11015	27024	Clinton, Anamosa .....	Chicago and Northwestern .....	74.1	2-
703	N. J.	2133	...	Bridgeton, Port Norris .....	Bridgeton and Port Norris .....	26.24	2-
704	Ill	11918	23050	Paris, Danville .....	Paris and Danville .....	36	1-
705	Ala	6616	...	Opelika, Dadeville .....	Savannah and Memphis .....	36.5	1-
706	Pa	2460	...	Lebanon, Tower City .....	Philadelphia and Reading .....	43.1	1-
707	Tenn	10014	19013	Tracy City, Cowan .....	Tennessee Coal and Railroad Co..	23	1-
708	W. Va	4189	...	Laurel Junction, Volcano....	Laurel Fork and Sand Hill .....	8	1-
709	Conn	945	910	Branchville, Ridgefield ....	Daubury and Norwalk .....	4	...
710	Ga	6231	...	Columbus, Hamilton .....	North and South .....	22.31	1-
711	Ill	11430	23006	Sagetown, Keithsburg .....	Rockford, Rock Island & St. Louis.	18	...
712	Mich	12953	24032	Muskegon, Big Rapids .....	Chicago and Michigan Lake Shore	54.64	2-
713	Mich	12048	24014	Flint, Otter Lake .....	Flint and Pere Marquette .....	19	...
714	Tenn	10095	19015	Jasper, Bridgeport .....	Nashville and Chattanooga .....	18	...
715	Iowa	11012	27004	Muscataine, Lone Tree .....	Burlington, Cedar Rapids and Minnesota.	21.23	1-
716	Pa	2459	...	Oleopolis, Pit Hole .....	Pit Hole Valley .....	7	1-
717	Ga	6144	...	Carterville, Rock Mart .....	Cherokee .....	22	1-
718	La	8004	...	Clinton, Port Hudson .....	Clinton and Port Hudson .....	23	...
719	Wis	13014	25014	Stillwater Junction, Stillwater	West Wisconsin .....	31	2-
720	Pa	2477	...	Conshohocken, Flourtown ..	Philadelphia and Reading .....	71	1-
721	Va	4701	...	Glade Spring, Saltville .....	Atlantic, Mississippi and Ohio ..	91	2-
722	Fla	6402	...	Tallahassee, Saint Mark's ..	Jacksonville, Pensacola & Mobile	21.75	...
723	N. H.	...	351	Wolfborough Junction, Wolfborough.	Eastern .....	12.11	3-
724	Va	4406	...	Richmond, West Point .....	Richmond and York River .....	40	2-
725	Tenn	10012	19012	Morristown, Riverside .....	Cincinnati, Cumberland Gap and Charleston	38.8	11
726	Ill	11413	23022	Joliet, Lake Station .....	Michigan Central .....	45	1-
727	Pa	2407	...	Bridgeport, Downingtown...	Philadelphia and Reading .....	21.4	1-
728	N. Y.	1567	1210	Goshen, Pine Island .....	Erie, (late Goshen & Deckertown)	11	2-
729	Ky	9824	20014	Grayson, Greenup C. H. ....	Eastern Kentucky .....	21	1-

are conveyed, the accommodations for mails and agents, &c.—Continued.

Whole weight carried any distance for thirty days.			Average weight carried whole distance.		Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Remarks.	Order.
Outward.	Inward.	Total.	30 days, total.	Per day, total.					
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Feet and inches.				
1,272	1,015	2,887	1,805		61 13 by 9, s. l. ....	6	\$40 00		681
2,247	3,204	5,451	1,703		56 9 by 5, f. f., s. l. ....	6	40 00		682
1,041	776	1,817	1,591		53 4 by 3; no r. a. ....	6	40 00		683
2,069	1,506	3,575	1,516		51 12 by 6.6, f. f., s. l. ....	6	40 00		684
1,230	1,530	2,760	1,531		51 b. c.; no r. a. ....	6	40 00		685
1,116	685	1,801	1,535		51 7.5 by 6.10, f. f., s. l. ....	6	40 00		686
4,485	4,109	8,594	1,517		50 10.9 by 6, f. f., s. l. ....	6	40 00		687
789	490	1,279	1,279		42 b. c.; no r. a. ....	6	40 00		688
954	637	1,591	1,240		41 10.4½ by 7.7, f. f.; no r. a. ....	6	40 00		689
1,363	1,264	2,627	1,170		38 No apt.; no r. a. ....	6	40 00		690
4,611	1,851	6,462	6,127		204 7 by 6, f. f. c., s. l. ....	6	39 02		691
1,871	1,094	2,965	2,162		72 b. c.; no r. a. ....	6	38 40		692
2,626	2,321	4,947	4,417		149 ..... ..	3	38 07		693
2,249	1,766	4,015	1,580		52 r. a. in b. c.; s. l. ....	6	35 00		694
3,051	2,101	5,152	3,821		127 No r. a. ....	6	31 21		695
85,040	31,427	116,467	103,643	3,454	r. p. o., 51.2 by 9.10, f. f., s. l. ....	7	30 00	In June, 1874	696
11,273	6,344	17,617	7,451		248 12 by 7, f. f., s. l. ....	6	30 00	Distance counted from Dalton.	697
11,817	6,219	18,036	7,039		234 12 by 7, fixtures, s. l. ....	6	30 00		698
4,816	3,107	7,923	5,660		188 4.10 by 2.10, f. f., d. l. 8 miles, 11½ lines 4 miles.	11*	30 00		699
2,634	4,824	7,458	4,752		158 9 by 6, f. f., s. l. ....	6	30 00	In June, 1874	700
4,316	2,591	6,907	3,956		132 12 by 7, f. f., s. l. ....	12	30 00		701
6,593	3,533	10,126	3,252		109 9.6 by 9.6, f. f., s. l. ....	6	30 00		702
2,570	1,655	4,225	2,519		83 8.6 by 7, f. f.; no r. a. ....	12	30 00		703
1,423	2,363	3,786	2,025		67 10 by 5, f. f., s. l. ....	6	30 00		704
1,718	1,148	2,866	1,995		66 9 by 5, f. f., s. l. ....	6	30 00		705
5,411	3,538	8,949	1,897		63 6.7 by 6.2. 6.10 by 6, f. f., s. l. ....	7½*	30 00		706
863	1,411	2,274	1,906		63 No apt. ....	6	30 00	In May 1874	707
1,072	749	1,821	1,821		60 2.6 by 2.6; no r. a. ....	18	30 00		708
1,102	495	1,597	1,597		53 No r. a. ....	12	30 00	Branch; main route \$85.11, (201.)	709
976	554	1,530	1,426		47 3.6 by 2.6; no r. a. ....	6	30 00		710
1,649	799	2,448	1,364		45 b. c.; no r. a. ....	12	30 00		711
2,539	2,032	4,571	2,584		43 12 by 10, s. l. ....	6	30 00	60 days, in Sept., 1873, and Jan. 1874.	712
1,086	787	1,873	1,285		43 r. a., s. l.; no distribution..	6	30 00		713
644	616	1,260	1,260		42 No r. a. ....	6	30 00		714
1,315	1,219	2,534	1,254		41 10.4½ by 7.7, f. f., s. l. ....	6	30 00		715
753	496	1,249	1,249		41 11 by 6.10, f. f.; no r. a. ....	6	30 00		716
679	315	994	994		37 8 by 3, locked; no r. a. ....	6	30 00	27 days	717
542	395	937	937		32 No apt. ....	3	30 00	In May, 1874	718
596	220	816	816		27 b. c.; no r. a. ....	6	30 00	Branch; main route \$50, (362.)	719
854	449	1,303	746		24 No r. a. ....	6	30 00		720
408	232	640	640		21 .....do.....	6	30 00		721
236	174	410	410		13 .....do.....	3	30 00	Branch; main route \$75, (281.)	722
275	160	435	335		11 .....do.....	12	30 00		723
3,275	1,529	4,804	3,358		112 10.7 by 8.11, f. f.; s. l. ....	6½*	25 00		724
2,897	2,031	4,928	2,397		89 12 by 7, f. f., s. l. ....	6	25 00		725
1,823	1,599	3,422	1,121		36 r. a. in b. c., s. l. ....	6	25 00		726
1,243	645	1,888	1,037		34 No r. a. ....	6	25 00		727
1,639	961	2,600	1,954		65 7 by 6, f. f. c., s. l. ....	6	22 18		728
3,787	480	4,267	4,267		142 3 by 2.6, s. l. ....	6	21 05		729

JOHN L. ROUTT.  
Second Assistant Postmaster-General.

## Index to Table E.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Alabama and Chattanooga .....	435	6615	.....	Boston, Hartford and Erie .....	333	607	95
Allegheny Valley .....	202	2442	.....	Bridgeton and Port Norris .....	703	2133	.....
Allegheny Valley. (See Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh.)				Brunswick and Chillicothe and Saint Louis, Council Bluffs and Omaha .....	547	10514	2011
Androscoggin .....	244	19	34	Buffalo and Jamestown .....	513	.....	129
Arkansas Central .....	644	7502	.....	Buffalo, Corry and Pittsburgh. (See Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh.)			
Atchison and Nebraska .....	312	14212	33009	Buffalo, New York and Philadelphia .....	411	1509	1249
Atchison, Topeka and Santa Fe. Do .....	183	14183	33007	Burlington and Missouri River.. Do .....	40	11003	2700
Athol and Enfield. (See Springfield, Athol and Northeastern.)	183	14183	33007	Do .....	60	11003	2700
Atlanta and Richmond Air-Line.	287	6017	.....	Do .....	423	11018	2707
Atlanta and West Point .....	49	6003	.....	Do .....	431	11003	2705
Atlantic and North Carolina .....	350	5005	.....	Do .....	573	11003	2700
Atlantic and Great Western .....	173	9006	.....	Do .....	31 p't		
Do .....	180	9006	.....	Do .....	653	11003	2709
Do .....	214	9038	.....	4th p't			
Do .....	271	2444	.....	Burlington and Missouri River in Nebraska .....	369	14479	3404
Do .....	330	9006	.....	Do .....	326	14451	3402
Do .....	574	9041	.....	Do .....	515	14497	3405
Atlantic, Mississippi and Ohio ..	28	4414	.....	Burlington and Southwestern ..	692	11019	2705
Do .....	389	4413	.....	Burlington, Cedar Rapids and Minnesota .....	342	11012	2701
Do .....	396	4412	.....	Do .....	652	11012	2702
Do .....	641	4411	.....	Do .....	689	11012	2700
Do .....	721	4701	.....	Do .....	715	11012	2701
Atlantic, Tennessee and Ohio ..	682	5213	.....	Cairo and Vincennes .....	647	11917	2805
Baltimore and Ohio .....	18	3504	.....	California and Oregon .....	225	14703	4001
Do .....	50	4102	.....	California Northern .....	511	14709	4004
Do .....	361	3518	.....	California Pacific .....	99	14707	4000
Baltimore and Potomac .....	153	3514	.....	Do .....	224	14707	4000
Do .....	541	3515	.....	Do .....	505	14708	4000
Bangor and Piscataquis. (See Consolidated European and North American.)				Cape Cod .....	146	663	65
Boston and Albany .....	2	605	605	Do .....	162	670	65
Do .....	6	605	605	Cape Cod. (See Old Colony and Newport.)			
Do .....	13	605	605	Carbondale and Shawneetown ..	621	11904	2800
Do .....	315	721	650	Carrollton and Oneida .....	646	9010	.....
Do .....	415	641	632	Cayuga Lake .....	484	1529	124
Do .....	580	733	655	Cazenovia and Canastota. (See Cazenovia, Canastota and De Ruyter.)			
Do .....	621	638	629	Cazenovia, Canastota and De Ruyter, (late Cazenovia and Canastota) .....	523	1562	125
Do .....	627	639	630	Central of Iowa .....	464	11018	2701
Boston and Lowell and Nashua and Lowell .....	75	603	603	Central Pacific .....	21	14701	4001
Do .....	337	278	257	Do .....	373	14876	4001
Do .....	476	636	627	Central Railroad and Banking Company .....	122	6004	.....
Do .....	551	631	624	Do .....	136	6009	.....
Boston and Lowell and Nashua and Lowell, (late Lexington and Arlington) ..	563	632	625	Do .....	526	6013	.....
Boston and Lowell and Nashua and Lowell .....	590	629	623	Do .....	527	6014	.....
Boston and Maine .....	82	602	602	Central Vermont, (late Rutland and Burlington) .....	47	422	40
Do .....	89	602	602	Do .....	42	422	40
Do .....	135	221	221	Central Vermont, (late Vermont Central) .....	52	461	43
Do .....	452	602	602	Central Vermont, (late Vermont Central and Vermont and Canada) .....	63	412	41
Do .....	475	308	259	Central Vermont, (late Vermont Valley) .....	101	427	42
Do .....	519	728	652	Central Vermont, (late Sullivan) ..	102	421	42
Do .....	538	610	610	Central Vermont, (late Vermont and Massachusetts) .....	140	600	40
Do .....	640	622	621	Central Vermont, (late Rutland and Burlington) .....	144	422	42
Boston and Providence .....	46	608	608	Central Vermont, (late Vermont Central) .....	152	926	40
Do .....	504	617	616	Central Vermont, (late Vermont Central & Vermont & Canada) ..	154	152	22
Boston and Providence, (late Stoughton Branch) .....	608	650	633				
Boston, Barre and Gardner .....	364	745	660				
Boston, Clinton and Fitchburgh ..	245	688	644				
Do .....	247	640	631				
Do .....	412	735	656				
Do .....	457	742	659				
Boston, Concord and Montreal ..	150	253	252				
Do .....	363	331	261				
Boston, Hartford and Erie .....	196	607	607				
Do .....	241	925	901				
Do .....	321	606	606				



## Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Central Vermont, (late Vermont and Canada).....	176	508	408	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul).....	76	12005	25002
Central Vermont, (late Ogdensburg and Lake Champlain)...	193	1022	1242	Do .....	93	13304	25001
Central Vermont, (late New London Northern) .....	226	696	647	Do .....	98	13504	25009
Central Vermont, (late Vermont Central) .....	228	926	902	Do .....	237	13006	25003
Do .....	229	926	902	Do .....	279	13009	25006
Central Vermont, (late Harlem Extension) .....	302	1524	1279	Do .....	463	13007	25004
Do .....	326	1524	1279	Do .....	479	13394	25008
Central Vermont, (late Vermont Central and Vermont and Canada) .....	377	520	409	Do .....	565	13514	26010
Champlain and Saint Lawrence ..	126	1023	1258	Do .....	572	13841	26011
Chenango and Allegheny .....	409	2452	.....	Do .....	659	13010	25007
Cherokee .....	717	6144	.....	Chicago, Pekin and Southwestern	442	11920	23051
Chesapeake and Ohio .....	177	4406	.....	Chicago, Rock Island and Pacific	32	11404	23015
Do .....	392	4293	.....	Do .....	71	11005	27014
Cheshire and Ashuelot .....	125	689	645	Do .....	238	11412	23016
Do .....	403	703	649	Do .....	309	11004	27017
Chester and Tamaroa Coal and Railroad Company .....	650	11911	23047	Do .....	449	11005a	27015
Chicago and Alton .....	41	11406	23017	Do .....	529	11005a	27015
Do .....	159	11416	23018	Do .....	662	11005b	27016
Do .....	359	10523a	23022	Cincinnati and Martinsville .....	643	12015	22015
Do .....	517	10522a	23021	Cincinnati and Muskingum .....	263	9033	.....
Do .....	620	11424	23019	Cincinnati and Terre Haute .....	694	12029	22029
Do .....	631	11424	23019	Cincinnati, Cumberland Gap and Charleston .....	725	10012	19012
Chicago and Illinois Southern, Consolidated .....	684	11906	23044	Cincinnati, Hamilton and Dayton	59	9030	.....
Chicago and Lake Huron, (late Peninsular) .....	492	12520	24020	Do .....	87	9030	.....
Do .....	516	12522	24022	Do .....	134	9029	.....
Do .....	530	12522	24022	Cincinnati, La Fayette and Chicago .....	69	12028	22028
Chicago and Michigan Lake Shore	216	12521	24021	Cincinnati, Richmond and Fort Wayne .....	648	12020	22020
Do .....	488	12521	24021	Cincinnati, Wabash and Michigan .....	605	12021	22021
Do .....	712	12953	24032	Cleveland and Pittsburgh .....	88	9007	.....
Chicago and Northwestern .....	34	11403	23003	Do .....	121	9003	.....
Do .....	35	11403	23003	Do .....	493	9009	.....
Do .....	36	11403	23003	Cleveland, Columbus, Cincinnati and Indianapolis .....	29	9046	.....
Do .....	61	13001	25009	Do .....	43	9018	.....
Do .....	62	11401	23001	Do .....	117	9015	.....
Do .....	78	11402	23002	Cleveland, Mount Vernon and Delaware .....	340	9005	.....
Do .....	184	13013	25010	Clinton and Port Hudson .....	718	8004	.....
Do .....	209	12950	24031	Colorado Central .....	421	17038	32004
Do .....	242	12846	24029	Do .....	598	17038	32004
Do .....	356	13017	25012	Columbus and Hocking Valley ..	240	9040	.....
Do .....	515	11017b	27013	Do .....	675	9040	.....
Do .....	595	11408	23004	Columbus and Xenia .....	12	9016	.....
Do .....	702	11015	27024	Columbus, Chicago and Indiana Central .....	42	9017	.....
Chicago and Superior, (late Madison and Portage) .....	494	13016	25023	Concord and Claremont .....	336	255	254
Chicago, Burlington and Quincy ..	24	11405	23007	Concord .....	72	251	251
Do .....	26	11405	23007	Do .....	416	256	255
Do .....	67	11417	23010	Do .....	567	269	256
Do .....	219	11002	27011	Connecticut and Passumpsic Rivers. (See Connecticut and Passumpsic Rivers and Massawippi Valley.)			
Do .....	292	11415	23009	Connecticut and Passumpsic Rivers and Massawippi Valley, (late Connecticut and Passumpsic Rivers) .....	141	452	402
Do .....	293	11415	23009	Connecticut River .....	73	702	648
Do .....	382	11432	23011	Connecticut Valley .....	412	976	914
Do .....	401	11409	23008	Connecticut Western .....	570	980	916
Do .....	405	11901	23012	Consolidated European and North American .....	107	181	9
Do .....	408	11409	23008	Consolidated European and North American, (late Bangor and Piscataquis) .....	433	183	10
Do .....	456	11405	23007	Continental Improvement Company .....	351	12955	24034
Do .....	557	11405	23007	Contocook River .....	548	299	258
Do .....	658	11919	23014	Cooperstown and Susquehanna Valley .....	299	1525	1278
Do .....	663	11902	23013				
Chicago, Cincinnati and Louisville	437	12014	22014				
Chicago, Danville and Vincennes	697	11434	23042				
Chicago, Dubuque and Minnesota	344	11016	27012				
Do .....	348	11016	27012				
Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul) .....	39	13513	26013				
Do .....	54	11921	23035				

## Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Crews, Joseph, (contractor).....	693	5611	.....	Evansville, Owensborough and Nashville, (late Owensborough and Russellville) .....	700	9842	20015
Cumberland and Pennsylvania ..	561	3512	.....	Fall Brook Coal Company .....	658	2484	.....
Cumberland Valley .....	560	2474	.....	Fall River, Warren and Providence .....	459	821	504
Danbury and Norwalk ... ..	201	945	910	Fitchburgh .....	52	664	664
Do .....	489	945	910	Do .....	402	637	637
Do .....	709	945	910	Do .....	523	635	635
Dayton and Michigan .....	110	9027	.....	Flint and Père Marquette .....	227	12515	24013
Dayton and Union .....	323	9028	.....	Do .....	425	12516	24014
Delaware and Hudson Canal .....	171	1013	1245	Do .....	713	12942	24014
Do .....	490	2418	.....	Fonda, Johnstown and Gloversville .....	282	1561	1273
Do .....	512	1544	1244	Fort Wayne, Jackson and Saginaw .....	426	12509	24002
Delaware, Lackawanna and Western .....	199	1040	1230	Fort Wayne, Muncie and Cincinnati .....	424	13019	22019
Do .....	217	2419	.....	Freehold and Jamesburgh Agricultural .....	291	2115	.....
Do .....	372	1223	1229	Gilman, Clinton and Springfield .....	542	11907	23034
Do .....	420	1405	1228	Goshen and Deckertown. (See Erie.) .....	225	7006	.....
Do .....	445	1545	1231	Grand Gulf and Port Gibson .....	524	12515	24015
Denver and Boulder Valley .....	378	17051	32003	Grand Rapids, Newaygo and Lake Shore .....	701	12527	24022
Denver and Rio Grande .....	382	17064	32001	Grand Tower Mining, Manufacturing and Transportation Company .....	667	11421	23032
Detroit and Bay City .....	289	12529a	24013	Grand Trunk .....	111	116	6
Detroit and Milwaukee .....	165	12507	24006	Do .....	142	116	6
Detroit, Eel River and Illinois ..	354	12026	22026	Do .....	149	116	6
Detroit, Hillsdale and Indiana ..	664	12525	24024	Do .....	179	12504	24007
Detroit, Lansing and Lake Michigan .....	269	12517	24017	Do .....	472	13295	25025
Do .....	674	12954	24033	Green Bay and Minnesota .....	51	10505	24007
Dorchester and Delaware .....	527	3509	.....	Hackensack and New York. (See Erie.) .....	65	10505	24007
Dubuque and Southwestern .....	331	11006	27020	Do .....	105	10510	24007
Dunkirk, Allegheny Valley and Pittsburgh .....	485	1580	1265	Do .....	502	2433	.....
Dunkirk and Fredonia .....	130	1338a	1250	Hannibal and Saint Joseph .....	51	10505	24007
Dutchess and Columbia .....	571	1541	1277	Do .....	65	10505	24007
Do .....	639	1541	1277	Do .....	105	10510	24007
Eastern .....	23	601	601	Hanover Branch .....	502	2433	.....
Eastern, (late Portland, Saco and Portsmouth) .....	49	114	124	Harlem Extension. (See Central Vermont.) .....	182	955	912
Eastern .....	300	732	654	Hartford, Providence and Fishkill .....	422	972	.....
Do .....	390	619	618	Hartford, Providence and Fishkill, (late Rockville) .....	619	749	749
Do .....	581	616	615	Hopkinton .....	215	943	943
Do .....	589	727	651	Housatonic .....	221	943	943
Do .....	596	620	619	Do .....	222	943	943
Do .....	625	621	620	Huntington and Broad Top .....	312	2435	.....
Do .....	723	.....	351	Illinois Central .....	127	11407	23032
Eastern Kentucky .....	729	9824	20014	Do .....	151	11418	23032
Eastern Shore .....	292	3402	.....	Do .....	163	11007	23032
East Tennessee, Virginia and Georgia. } .....	27 {	10001 } .....	19002	Do .....	399	11010	23032
Do .....	157 {	10002 } .....	19002	Indianapolis and Vincennes, operated by Pennsylvania Company .....	510	12001	22011
E'gefield and Kentucky. (See Saint Louis and Southeastern Consolidated.) .....	1	1001	1201	Indianapolis, Bloomington and Western .....	192	12017	22017
Erie .....	11	1038	1202	Indianapolis, Cincinnati and La Fayette .....	68	12003	22003
Do .....	14	1035	1207	Do .....	70	12005	22005
Do .....	242	1032	1205	Do .....	91	12004	22004
Do .....	273	2409	.....	Do .....	96	12004	22004
Do .....	335	1033	1206	Do .....	232	12004	22004
Do .....	393	1010	1204	Do .....	541	12025	22025
Do .....	395	1574	1203	Iowa Eastern .....	522	11022	22022
Erie, (late Hackensack and New York) .....	450	2119	.....	Ichaca and Athens .....	554	1579	1579
Erie .....	462	2128	.....	Jackson, Lansing and Saginaw. (See Michigan Central.) .....	622	11509	22009
Do .....	539	1010	1204	Jacksonville, Northwestern and Southeastern .....	622	11509	22009
Do .....	550	1009	1202				
Do .....	603	2120	.....				
Do .....	604	2465	.....				
Do .....	625	2424	.....				
Erie, (late Towanda Coal Company) .....	682	2471	.....				
Erie .....	691	1045	1209				
Erie, (late Goshen & Deckertown) ..	722	1567	1210				
Evansville and Crawfordsville ..	203	12012	22012				
Evansville and Crawfordsville. (See Loganport, Crawfordsville and Southwestern.) ..							

## Index to Table E Continued.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Jacksonville, Pensacola and Mobile .....	281	6402	.....	Madison and Portage. (See Chicago and Superior.)			
Do .....	722	6402	.....	Maine Central .....	106	9	2
Jeffersonville, Madison and Indianapolis .....	92	12007	22007	Maine Central, (late Portland and Kennebeck) .....	131	115	5
Do .....	462	12006	22006	Do .....	132	115	5
Do .....	687	12011	22011	Do .....	235	1	1
Junction and Breakwater .....	559	3404	.....	Maine Central .....	329	9a	3
Junction and Fort Kearney .....	313	14314	33012	Maine Central, (Belfast division) .....	448	201	11
Kansas Central .....	528	14235	33010	Manchester and Lawrence .....	147	627	622
Kansas City, Saint Joseph, and Council Bluffs .....	104	10506	22006	Maryland and Delaware .....	455	3403	.....
Do .....	413	10506	22006	Maysville and Lexington .....	419	9843	20016
Kansas Pacific .....	77	14001	33001	Memphis and Charleston .....	83	6605	.....
Do .....	205	14001	33001	Memphis and Little Rock .....	172	7501	.....
Kentucky Central .....	170	9606	20002	Memphis, Carthage and Northwestern .....	532	10521	28021
Keokuk and Des Moines .....	246	11001	27019	Memphis, Clarksville and Louisville .....	145	10009	19009
Knox and Lincoln .....	206	204	13	Michigan Central .....	56	12506	24005
Lackawanna and Bloomsburgh .....	234	2417	.....	Do .....	375	12511	24010
Lake Erie and Louisville .....	473	9024	.....	Michigan Central, (leases Jackson, Lansing and Saginaw) .....	467	12510	24009
Lake Erie, Evansville and South-eastern .....	591	12030	22031	Michigan Central .....	487	12526	24025
Lake Ontario Shore .....	614	1592	1227	Do .....	536	12519	24019
Lake Shore and Michigan Southern .....	8	1039	1241	Do .....	634	12528	24027
Do .....	143	12502	24001	Do .....	726	11413	23022
Do .....	223	12501	9049	Michigan Lake Shore .....	556	12523	24023
Do .....	261	12503	24002	Middleborough and Taunton .....	578	676	640
Do .....	305	12512	24011	Midland Pacific .....	366	14483	34005
Do .....	355	9003	.....	Milwaukee and Saint Paul. (See Chicago, Milwaukee and Saint Paul.)			
Do .....	376	12505	24004	Milwaukee, Lake Shore and Western .....	29	13020	25018
Do .....	461	12529	24023	Do .....	672	13020	25018
Do .....	477	12504	24003	Mineral Point .....	454	13011	25020
Do .....	534	2446	.....	Do .....	597	13015	25021
Lake Shore and Tuscarawas Valley .....	566	9045	.....	Mississquoi and Clyde Rivers .....	360	523	522
Lake Superior and Mississippi .....	380	13508	25006	Mississippi Valley and Western .....	42	10519a	22018
Do .....	497	13512	26008	Missouri, Iowa and Nebraska .....	606	10516a	28016
Do .....	592	13837	26007	Missouri, Kansas and Texas .....	79	10512	22011
Laurel Fork and Sand Hill .....	702	4189	.....	Do .....	320	14006	33006
Lawrence and Southwestern .....	316	14311	33011	Do .....	696	10515a	22014
Lehigh Valley .....	16	2479	.....	Mobile and Girard .....	526	6608	.....
Do .....	166	2410	.....	Mobile and Montgomery .....	66	6612	.....
Do .....	257	2416	.....	Monadnock .....	466	738	657
Do .....	303	2412	.....	Monticello and Port Jervis .....	546	1564	1270
Do .....	654	2411	.....	Montreal and Plattsburgh .....	278	1021	1243
Lexington and Arlington. (See Boston and Lowell and Nashua and Lowell.)				Morgan's Louisiana and Texas .....	95	8001	.....
Little Miami .....	30	9031	.....	Do .....	615	8098	.....
Do .....	31	9031	.....	Nashville and Chattanooga .....	714	10095	19015
Do .....	188	9031	.....	Nashville and Chattanooga. (See Nashville, Chattanooga and Saint Louis.)			
Logansport, Crawfordsville and Southwestern .....	649	12027	22027	Nashville and Decatur .....	239	10006	19006
Logansport, Crawfordsville and Southwestern, (late Evansville and Crawfordsville) .....	465	12012a	22012a	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga) .....	38	10004	19004
Long Island .....	174	1006	1233	Do .....	84	10004	19004
Do .....	501	1008	1234	Do .....	91	10004	19004
Do .....	535	1007	1232	Do .....	253	10007	19007
Los Angeles and San Pedro .....	286	14728	46013	Do .....	655	10004	19004
Louisville, Cincinnati and Lexington .....	74	9607a	20004	Naugatuck .....	208	942	908
Do .....	175	9607	20003	Do .....	283	942	908
Do .....	481	9846a	20017	New Bedford, (late Taunton Branch) .....	97	677	641
Louisville and Nashville .....	55	9608	20005	New Bedford, (late New Bedford and Taunton) .....	207	678	642
Louisville and Nashville, (late Paducah and Gulf) .....	86	9611	20008	Do .....	352	672	639
Louisville and Nashville .....	443	9610	20007	New Haven and Derby .....	436	977	915
Do .....	544	9610	20007	New Haven and Northampton .....	224	938	906
Do .....	545	9742	20012	Do .....	282	938	906
Do .....	695	9609	20006	Do .....	599	746	661
Louisville and Nashville and Great Southern, (late Louisville and Nashville) .....	90	10010	19010	New Haven, Middletown and Willimantic .....	474	975	913
Macon and Western .....	683	6143	.....	New Jersey Midland .....	211	2254	.....

## Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
New London Northern. (See Central Vermont.)				Paducah and Memphis, (late Paducah and Gulf)	555	9612	250
New Orleans, Jackson and Great Northern	44	8002		Paducah and Memphis	640	10015	100
New Orleans, Mobile and Texas	133	6613		Paris and Danville	704	11918	250
Do	558	8090		Paris and Decatur	677	11914	250
New York and Canada, (late Vermont Central and Vermont and Canada)	394	1582	1263	Peninsular. (See Chicago and Lake Huron.)			
New York and Oswego Midland	440	1454	1248	Pennsylvania	5	2103	
Do	491	1586	1240	Do	7	2101	
Do	493	1540	1235	Do	9	2401	
Do	600	1569	1238	Do	81	2422	
Do	612	1546	1236	Do	138	2105	
Do	618		1292	Do	139	2105	
Do	635	1585	1239	Do	156	2422	
New York Central and Hudson River	3	1079	1217	Do	161	2422	
Do	4	1002	1211	Do	251	2116	
Do	22	1282	1218	Do	262	2109	
Do	108	1027	1213	Do	264	2427	
Do	232	1037	1216	Do	306	2440	
Do	249	1016	1212	Do	308	2436	
Do	367	1030	1214	Do	310	2439	
Do	381	1036	1215	Do	327	2439	
New York, Kingston and Syracuse, (Trustees first-mortgage bonds)	502	1576	1262	Do	334	2475	
New York, New Haven and Hartford	80	936	904	Do	346	2443	
Do	277	932	903	Do	429	2109	
North and South	710	6231		Do	446	2415	
Northern	103	254	253	Do	482	2454	
Do	522	254	253	Do	486	2415	
Northern Central	17	3502		Do	496	2438	
Do	622	2423		Do	514	2432	
Northern Pacific	314		43001	Do	520	2125	
Do	400	13838	26005	Do	531	2450	
North Missouri. (See Saint Louis, Kansas City and Northern.)				Do	537	2445	
North Pennsylvania	160	2404		Do	564	2117	
Do	280	2404		Do	610	2118	
Northwestern North Carolina	553	5280		Do	630	2114	
Ogdensburgh and Lake Champlain. (See Central Vermont.)				Do	632	2109	
Oil Creek and Allegheny River, and Buffalo, Corry and Pittsburgh, (late Allegheny Valley)	210	2425		Do	633	2109	
Do	343	2425		Do	636	2437	
Do	349	2425		Do	637	2457	
Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh	453	1043	1252	Do	638	2131	
Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley)	679	2470		Do	668	2462	
Old Colony and Newport	109	609	609	Do	676	2469	
Do	186	654	634	Pennsylvania, (late Pennsylvania and Delaware)	690	2432	
Old Colony and Newport, (operating Cape Cod)	353		737	Pennsylvania and Delaware. (See Pennsylvania.)			
Old Colony and Newport	357	731	653	Pennsylvania Company	317	9047	
Do	480	615	614	Do	585	9048	
Do	692	655	635	Pennsylvania Company. (See Indianapolis and Vincennes.)			
Omaha and Northwestern	500	14478	34003	Pensacola and Louisville	518	6404	
Orange, Alexandria and Manassas. (See Washington City, Virginia Midland and Great Southern.)				Peoria and Rock Island	410	11435	210
Oswego and Syracuse	233	1029	1256	Peoria, Pekin and Jacksonville	383	11414	250
Owensborough and Russellville. (See Evansville, Owensborough and Nashville.)				Do	432	11414	250
Paducah and Gulf. (See Paducah and Memphis.)				Philadelphia and Baltimore Central	250	2402	
Paducah and Gulf. (See Louisville and Nashville.)				Do	275	2406	
				Philadelphia and Darby	191	2406	
				Philadelphia and Reading	15	2476	
				Do	115	2402	
				Do	296	2414	
				Do	430	2413	
				Do	439	2405	
				Do	584	2451	
				Do	593	2467	
				Do	607	2463	
				Do	651	2424	
				Do	686	2457	
				Do	689	2402	
				Do	673	2452	
				Do	706	2468	
				Do	720	2407	
				Do	725	2407	
				Philadelphia, Wilmington and Baltimore	10	3501	
				Do	137	3401	

## Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Philadelphia, Wilmington and Baltimore .....	506	3501	.....	Saint Louis, Council Bluffs and Omaha. (See Brunswick and Chillicothe and Saint Louis, Council Bluffs and Omaha.)			
Pit Hole Valley .....	716	2459	.....	Saint Louis, Kansas City and Northern, (late North Missouri)	53	10504	28004
Pittsburgh and Connellsville....	368	2464	.....	Do .....	57	10504	28004
Do .....	441	2464	.....	Do .....	64	10504	28004
Do .....	601	2464	.....	Do .....	258	10507	28007
Pittsburgh, Cincinnati and Saint Louis .....	20	9036	.....	Saint Louis, Kansas City and Northern, (late North Missouri)	444	10509	28009
Do .....	100	12009	22009	Saint Paul and Pacific .....	266	13507	26002
Do .....	204	9012	.....	Do .....	458	13840	26003
Do .....	294	9034	.....	Do .....	460	13506	26001
Do .....	311	2456	.....	Saint Paul and Sioux City .....	379	13505	26004
Do .....	385	12013	22013	Savannah and Charleston .....	118	5606	.....
Do .....	509	9036	.....	Savannah and Memphis .....	705	6616	.....
Do .....	549	12016	22016	Selma, Marion and Memphis .....	569	6606	.....
Portland and Kennebeck. (See Maine Central.)				Sheboygan and Fond du Lac ..	332	13012	25019
Portland and Ogdensburgh .....	358	521	410	Shepaug. (late Shepaug Valley) ..	417	981	917
Portland and Rochester .....	338	117	7	Shepaug Valley. (See Shepaug.)			
Port Royal .....	540	5707	.....	Sioux City and Pacific .....	243	11011	27029
Portland, Saco and Portsmouth. (See Eastern.)				Do .....	471	11011	27029
Portsmouth, Great Falls and Conway .....	406	309	260	Skaneateles .....	297	1046	1251
Providence and Worcester .....	231	801	801	Sodus Point and Southern .....	609	1590	1285
Do .....	623	748	662	Somerset and Mineral Point .....	552	2472	.....
Providence, Warren and Bristol	339	803	803	South and North Alabama .....	155	6604	.....
Queen Anne and Kent .....	574	3511	.....	Do .....	236	6604	.....
Quincy, Missouri and Pacific .....	422	10520a	28019	Do .....	260	6604	.....
Raleigh and Augusta Air-Line ..	451	5216	.....	South Carolina .....	123	5605	.....
Raleigh and Gaston .....	259	5001	.....	Do .....	265	5605	.....
Reading and Columbia .....	470	2431	.....	Do .....	322	5605	.....
Do .....	483	2431	.....	Do .....	576	5605	.....
Richmond and Danville .....	113	4407	.....	Southern Central .....	414	1542	1276
Do .....	114	5004	.....	Southern Minnesota .....	319	13501	26016
Do .....	212	5004	.....	Southern Pacific .....	181	14702	46002
Do .....	213	5004	.....	Do .....	190	14702	46002
Richmond and York River .....	724	4408	.....	Do .....	384	14945	46014
Richmond, Fredericksburgh and Potomac .....	37	4401	.....	Southern Railroad Association ..	45	7001	.....
Rochester and Pine Creek .....	582	1587	1262	Southern Railway Security Co ..	665	10005	19005
Rockford, Rock Island and Saint Louis .....	198	11429	23005	South Shore .....	397	656	636
Do .....	711	11430	23006	Southwestern .....	254	6010	.....
Rockville. (See Hartford, Providence and Fishkill.)				Do .....	264	6015	.....
Rome, Watertown and Ogdensburgh .....	128	1026	1227	Do .....	498	6015	.....
Do .....	129	1026	1227	Do .....	671	6015	.....
Do .....	391	1042	1225	Spartanburgh and Union .....	666	5610	.....
Do .....	398	1024	1226	Springfield and Illinois South-eastern .....	255	11433	23033
Rutland and Burlington. (See Central Vermont.)				Springfield, Athol and North-eastern, (late Athol and Enfield) .....	427	658	741
Sacramento Valley .....	404	14705	46005	Staten Island .....	200	1005	1260
Saginaw Valley and Saint Louis	670	12949	24030	Stockton and Copperopolis .....	503	14881	46012
Saint Clair and Chicago Air-Line	568	12513	24012	Do .....	525	11881	46012
Saint Croix and Penobscot .....	187	84	4	Stonington and Providence .....	112	802	802
Saint Joe and Denver City .....	347	14004	33004	Stoughton Branch. (See Boston and Providence.)			
Saint Louis, Alton and Terre Haute .....	169	11422	23030	Sullivan. (See Central Vermont.)			
Saint Louis and Iron Mountain and Cairo and Fulton .....	167	10502	23002	Suncook Valley .....	699	342	262
Do .....	374	10502	28002	Susquehanna, Gettysburgh and Potomac .....	324	2434	.....
Do .....	613	10502	28002	Sycamore and Cortland .....	220	11410	23052
Saint Louis and Southeastern. (See Saint Louis and Southeastern Consolidated.)				Syracuse and Chenango .....	507	1581	1364
Saint Louis and Southeastern Consolidated, (late Edgemoor and Kentucky) .....	194	10008	19008	Syracuse, Binghamton and New York .....	197	1028	157
Saint Louis and Southeastern Consolidated, (late Saint Louis and Southeastern)				Syracuse Northern .....	447	1517	1207
Do .....	195	11900	23032	Taunton Branch. (See New Bedford.)			
Do .....	231	9612a	20010	Tennessee and Pacific .....	469	10123	19016
Do .....	656	11900	23032	Tennessee Coal and Railroad Company .....	707	10014	19013
				Texas and Pacific .....	218	8506	.....
				Texas, Mississippi River and Northwestern, (late Little Rock, Pine Bluff and New Orleans) ..	642	7525a	.....



## Index to Table E—Continued.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Toledo, Peoria and Warsaw .....	307	11411	23027	Vicksburgh and Brunswick .....	616	6621	.....
Do .....	577	11411	23027	Vicksburgh and Meridian .....	162	7003	.....
Toledo, Wabash and Western ...	23	9022	.....	Do .....	254	7003	.....
Do .....	85	11426	23023	Do .....	276	7003	.....
Do .....	272	9022	.....	Washington and Ohio .....	472	4404	.....
Do .....	341	9022	.....	Washington City, Virginia Mid-			
Do .....	365	11903	23025	land and Great Southern, (late			
Do .....	521	11916	23026	Orange, Alexandria and Ma-			
Do .....	533	11903	23025	nassaa) .....	25	4403	.....
Do .....	657	11427	23034	Do .....	322	4403	.....
Towanda Coal Company. (See				Do .....	624	4403	.....
Erie.)				Western Maryland .....	274	3507	.....
Troy and Boston .....	116	1017	1259	Western, of Alabama .....	120	6601	.....
Do .....	124	1017	1259	Do .....	270	6607	.....
Trustees first-mortgage bonds.				Do .....	438	6602	.....
(See New York, Kingston and				Western Union .....	387	13003	2513
Syracuse.)				West Jersey .....	153	2110	.....
Tuskegee .....	617	6619	.....	Do .....	172	2111	.....
Union Pacific .....	19	14401	34001	Do .....	267	2112	.....
Utah Central .....	371	16633	41001	Do .....	301	2113	.....
Utica and Black River .....	205	{ 1025 }	1283	West Wisconsin .....	362	13014	2514
Do .....	611	{ 1181 }	1284	Do .....	719	13014	2514
Utica, Ithaca and Elmira .....	434	1566	1269	Whitehall and Plattsburgh .....	645	1512	1281
Do .....	594	.....	1289	Whitewater Valley .....	345	9035	.....
Vaca Valley .....	626	14877	46015	Wilmington and Reading .....	661	2455	.....
Vermont and Canada. (See				Wilmington and Western .....	626	3405	.....
Central Vermont.)				Wisconsin Central, operated by			
Vermont and Massachusetts .....	142	690	646	Phillips & Colby Construction			
Do .....	189	690	646	Company .....	304	13015	2515
Vermont Central. (See Central				Do .....	325	13015	2515
Vermont.)				Do .....	370	13396	2515
Vermont Central and Vermont				Do .....	407	13015	2515
and Canada. (See Central				Do .....	672	13015	2515
Vermont.)				Wisconsin Valley .....	602	13019	2515
Vermont Valley. (See Central				Worcester and Nashua .....	164	653	60
Vermont.)				Worcester and Somerset .....	629	3516	.....





## Index to Table F.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Alabama and Chattanooga .....	355	6615	.....	Central Vermont, (late Rutland and Burlington) .....	80	482	406
Allegheny Valley .....	164	2442	.....	Central Vermont, (late Vermont Central) .....	83	461	403
Allegheny Valley. (See Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh.)				Central Vermont, (late Vermont Central and Vermont and Canada) .....	92	412	401
Arkansas Central .....	431	7502a	.....	Central Vermont, (late Rutland and Burlington) .....	102	482	406
Atlanta and Richmond Air-Line .....	249	6017	.....	Central Vermont, (late Harlem Extension) .....	129	1524	1279
Atchison, Topeka and Santa Fe .....	233	14143	30007	Central Vermont, (late Ogdensburg and Lake Champlain) .....	130	1022	1242
Do .....	255	14143	30007	Central Vermont, (late Vermont Central) .....	137	926	902
Atlantic and Great Western .....	183	9038	.....	Central Vermont, (late New London Northern) .....	161	696	647
Do .....	290	2444	.....	Central Vermont, (late Vermont and Canada) .....	198	508	408
Do .....	374	9006	.....	Do .....	234	520	409
Atlantic, Mississippi and Ohio .....	35	4414	.....	Chenango and Allegheny .....	304	2452	.....
Do .....	265	4413	.....	Chesapeake and Ohio .....	186	4406	.....
Do .....	295	4412	.....	Do .....	269	4293	.....
Baltimore and Ohio .....	14	3504	.....	Cheshire and Ashuelot .....	97	689	645
Do .....	14a	4102	.....	Do .....	288	703	649
Do .....	166	3518	.....	Chester and Tamaroa Coal and Railroad Company .....	380	11911	23047
Baltimore and Potomac .....	162	3514	.....	Chicago and Alton .....	69	11406	23017
Do .....	398	3515	.....	Do .....	117	10523a	28022
Bangor and Piscataquis. (See Consolidated European and North American.)				Do .....	123	11416	23018
Boston and Albany .....	3	605	605	Do .....	363	10523a	28022
Do .....	12	605	605	Chicago and Michigan Lake Shore .....	197	12521	24021
Do .....	314	641	632	Do .....	462	12953	24032
Boston and Lowell and Nashua and Lowell .....	60	603	603	Chicago and Northwestern .....	20	11403	23003
Do .....	268	278	257	Do .....	29	11403	23003
Boston and Maine .....	91	602	602	Do .....	48	11401	23001
Do .....	154	.....	221	Do .....	54	11402	23002
Boston and Providence .....	165	608	608	Do .....	56	13001	25009
Boston, Barre and Gardner .....	193	745	660	Do .....	57	13017	25012
Boston, Clinton and Fitchburgh .....	190	688	644	Do .....	200	12950	24031
Do .....	191	640	631	Do .....	201	12846	24029
Do .....	292	742	659	Do .....	232	13013	25010
Do .....	316	735	656	Do .....	410	11017b	27013
Boston, Concord and Montreal .....	131	253	252	Do .....	435	11015	27024
Do .....	185	331	261	Do .....	437	11408	23004
Boston, Hartford and Erie .....	157a	607	607	Chicago, Burlington and Quincy .....	22	11405	23007
Do .....	202	925	901	Do .....	24	11405	23007
Do .....	327	607	975	Do .....	75	11417	23010
Buffalo and Jamestown .....	386	.....	1290	Do .....	104	11415	23009
Buffalo, New York and Philadelphia .....	306	1509	1249	Do .....	124	11415	23009
Burlington and Missouri River .....	68	11003	27005	Do .....	240	11432	23011
Do .....	323	11018	27007	Do .....	297	11409	23008
Do .....	325	11003	27005	Do .....	299	11901	23012
Do .....	427	11003	27009	Do .....	305	11409	23008
		4th pt		Do .....	409	11902	23013
Burlington and Missouri River in Nebraska .....	228	14479	34004	Chicago, Cincinnati and Louisville .....	343	12014	22014
Do .....	248	14451	34002	Chicago, Danville and Vincennes .....	350	11434	23042
Burlington and Southwestern .....	359	11019	27008	Chicago, Dubuque and Minnesota .....	294	11016	27012
Cairo and Vincennes .....	250	11917	23037	Do .....	336	11016	27012
California and Oregon .....	133	14703	46003	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul) .....	43	13005	25002
California Pacific .....	177	14706	46006	Do .....	59	13513	26013
Do .....	416	14707	46007	Do .....	84	11921	23035
Cape Cod .....	106	663	637	Do .....	132	13004	25001
Do .....	142	670	638	Do .....	179	13504	26009
Cape Cod. (See Old Colony and Newport.)				Do .....	188	13006	25003
Central Pacific .....	38	14701	46001	Do .....	372	13009	25006
Do .....	216	14876	46010	Chicago, Pekin and Southwestern .....	344	11920	23051
Central Vermont, (late Vermont Valley) .....	61	487	407	Chicago, Rock Island and Pacific .....	18	11404	23015
Central Vermont, (late Sullivan) .....	62	481	405	Do .....	31	11005	27014
Central Vermont, (late Vermont Central) .....	72	461	403				
Central Vermont, (late Vermont and Massachusetts) .....	76	690	744				
Central Vermont, (late Vermont Central and Vermont and Canada) .....	78	412	401				

## Index to Table F—Continued.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Chicago, Rock Island and Pacific.	189	11412	23016	East Tennessee, Virginia and Georgia.	33	10001	10009
Do .....	364	11005a	27015	Do .....	34	10002	10009
Do .....	390	11005a	27015	Edgefield and Kentucky. (See Saint Louis and Southeastern Consolidated)			
Do .....	436	11005b	27016	Erie .....	1	1001	1301
Cincinnati and Martinsville .....	411	12015	22015	Do .....	13	1038	1301
Cincinnati and Terre Haute .....	459	12029	22029	Do .....	19	1035	1301
Cincinnati, Cumberland Gap and Charleston .....	439	10012	19012	Do .....	214	1032	1301
Cincinnati, Hamilton and Dayton .....	77	9030	.....	Do .....	271	1010	1301
Do .....	141	9029	.....	Do .....	273	1574	1301
Cincinnati, La Fayette and Chicago .....	26	12028	22028	Do .....	300	2409	.....
Cincinnati, Richmond and Fort Wayne .....	366	12020	22020	Do .....	301	1033	1301
Cleveland and Pittsburgh .....	107	9007	.....	Do .....	369	1045	1301
Do .....	169	9003	.....	Erie, (late Goshen and Deckertown) .....	444	1567	1301
Cleveland, Columbus, Cincinnati and Indianapolis .....	37	9046	.....	Evansville and Crawfordsville .....	170	12012	23012
Do .....	79	9018	.....	Evansville, Owensborough and Nashville, (late Owensborough and Russellville) .....	385	9842	23012
Do .....	135	9015	.....	Fall Brook Coal Company .....	418	2404	.....
Cleveland, Mount Vernon and Delaware .....	144	9005	.....	Fall River, Warren and Providence .....	326	221	24
Colorado Central .....	321	17038	38004	Fitchburgh .....	47	604	24
Columbus and Hocking Valley .....	194	9040	.....	Do .....	207	637	24
Columbus and Xenia .....	53	9016	.....	Flint and Père Marquette .....	136	12515	2401
Columbus, Chicago and Indiana Central .....	95	9017	.....	Do .....	334	12516	2401
Concord .....	44	251	251	Do .....	460	12948	2401
Do .....	315	256	255	Fort Wayne, Jackson and Saginaw .....	333	12509	2401
Concord and Claremont .....	138	255	254	Fort Wayne, Muncie and Cincinnati .....	330	12019	2401
Connecticut and Passumpsic Rivers. (See Connecticut and Passumpsic Rivers and Massawippi Valley.)				Goshen and Deckertown. (See Erie.)			
Connecticut and Passumpsic Rivers and Massawippi Valley, (late Connecticut and Passumpsic Rivers) .....	89	452	402	Grand Rapids, Newaygo and Lake Shore .....	396	12527	2401
Connecticut River .....	42	702	618	Grand Trunk .....	119	116	2401
Connecticut Valley .....	309	976	914	Do .....	308	12508	2401
Consolidated European and North American .....	87	181	9	Hannibal and Saint Joseph .....	36	10505	2401
Consolidated European and North American, (late Bangor and Piscataquis) .....	339	188	10	Do .....	40	10510	2401
Continental Improvement Company .....	341	12955	24034	Do .....	238	10505	2401
Cumberland Valley .....	404	2474	.....	Harlem Extension. (See Central Vermont.)			
Danbury and Norwalk .....	155	945	910	Hartford, Providence and Fishkill .....	220	955	2401
Do .....	425	945	910	Housatonic .....	196	943	2401
Dayton and Michigan .....	111	9027	.....	Do .....	401	943	2401
Delaware, Lackawanna and Western .....	205	2419	.....	Do .....	463	943	2401
Do .....	215	1228	1229	Illinois Central .....	70	11407	2401
Do .....	222	1040	1230	Do .....	82	11407	2401
Do .....	320	1405	1228	Do .....	116	11410	2401
Do .....	345	1545	1231	Do .....	157b	11007	2401
Denver and Boulder Valley .....	235	17051	38003	Do .....	280	11010	2401
Denver and Rio Grande .....	253	17064	38001	Indianapolis, Bloomington and Western .....	90	12017	2401
Detroit and Bay City .....	260	12529a	24013	Indianapolis, Cincinnati and La Fayette .....	23	12003	2401
Detroit and Milwaukee .....	159	12507	24006	Do .....	27	12005	2401
Detroit, Eel River and Illinois .....	360	12026	22026	Indianapolis, Peru and Chicago .....	168	12004	2401
Detroit, Hillsdale and Indiana .....	429	12525	24024	Iowa Eastern .....	405	11020a	2401
Detroit, Lansing and Lake Michigan .....	272	12517	24017	Jacksonville, Northwestern and Southeastern .....	451	11909	2401
Do .....	442	12954	24033	Jacksonville, Pensacola and Mobile .....	379	6402	.....
Dubuque and Southwestern .....	377	11006	27020	Jeffersonville, Madison and Indianapolis .....	121	12007	2401
Eastern .....	16	601	601	Junction and Fort Kearney .....	302	14314	2401
Eastern, (late Portland, Saco and Portsmouth) .....	17	114	124	Kansas Central .....	267	14235	2401
Eastern .....	264	619	618	Kansas City, Saint Joseph and Council Bluffs .....	115	10506	2401
Do .....	391	732	654	Do .....	310	10506	2401
Do .....	450	621	620	Kansas Pacific .....	73	14001	2401
Do .....	466	.....	351	Do .....	184	14001	2401
Eastern Kentucky .....	433	9824	20014	Kentucky Central .....	156	9606	2401
Eastern Shore .....	266	3402	.....	Do .....	226	9606	2401

## Index to Table F—Continued.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Keokuk and Des Moines .....	207	11001	27019	Milwaukee, Lake Shore and Western .....	252	13020	25012
Knox and Lincoln .....	174	204	13	Do .....	440	13020	25012
Lackawanna and Bloomsburgh ..	178	2417	.....	Missisquoi and Clyde Rivers....	163	523	522
Lake Erie, Evansville and South-eastern .....	419	12030a	22031	Mississippi Valley and Western..	335	10519a	28012
Lake Shore and Michigan South-ern .....	2	9008	.....	Missouri, Kansas and Texas....	46	10512	28011
Do .....	6	12501	9049	Do .....	49	10515a	28014
Do .....	9	1039	.....	Do .....	88	10515a	22014
Do .....	9	9004	1241	Do .....	332	14006	33006
Do .....	127	9021	.....	Mobile and Montgomery .....	108	6612	.....
Do .....	127	12501	24001	Montreal and Plattsburgh.....	368	1021	1243
Do .....	231	12502	24004	Nashville and Chattanooga. (See Nashville, Chattanooga and Saint Louis.)	192	10006	19006
Do .....	256	12505	24004	Nashville and Decatur .....	63	10004	19004
Do .....	362	12512	24011	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga).....	114	10004	19004
Lake Shore and Tuscarawas Valley.....	406	9045	.....	Do .....	234	10007	19007
Lake Superior and Mississippi ..	236	13508	26006	Do .....	369	10004	19004
Laurel Fork and Sand Hill .....	448	4189	.....	Do .....	412	942	908
Lawrence and Southwestern.....	319	14311	33011	Naugatuck .....	171	677	641
Lehigh Valley .....	32	2479	.....	New Bedford, (late Taunton Branch) .....	187	678	642
Do .....	139	2410	.....	New Bedford, (late New Bedford and Taunton) .....	376	672	639
Do .....	145	2410	.....	Do .....	340	977	915
Do .....	160	2410	.....	New Haven and Derby.....	99	938	906
Do .....	206	2416	.....	New Haven and Northampton...	397	938	906
Do .....	242	2412	.....	Do .....	210	1451a	2254
Do .....	358	2411	.....	New Jersey Midland .....	210	2132	.....
Little Miami .....	52	9031	.....	New London Northern. (See Central Vermont.)	122	6613	.....
Do .....	408	9031	.....	New Orleans, Mobile and Texas	233	1582	1263
Little Rock, Pine Bluff and New Orleans. (See Texas, Mississippi River and Northwestern.)	375	12027	2027	New York and Canada, (late Vermont Central and Vermont and Canada) .....	426	.....	1292
Logansport, Crawfordville and Southwestern .....	180	1006	21233	New York Central and Hudson River .....	4	1079	1217
Long Island .....	457	14723	46013	Do .....	5	1002	1211
Los Angeles and San Pedro .....	58	9608	20005	Do .....	50	1282	1218
Louisville and Nashville .....	103	9611	20008	Do .....	109	1027	1213
Louisville and Nashville, (late Paducah and Gulf).....	434	9609	20006	Do .....	211	1016	1212
Louisville and Nashville .....	113	10010	19010	Do .....	227	1030	1214
Louisville and Nashville. (See Louisville and Nashville and Great Southern.)	65	9607a	20004	Do .....	237	1036	1215
Louisville and Nashville and Great Southern, (late Louisville and Nashville).....	176	9607	20003	New York, New Haven and Hartford .....	85	936	904
Louisville, Cincinnati and Lexington .....	45	9	2	Do .....	361	932	903
Do .....	53	115	5	North and South .....	432	6231	.....
Maine Central .....	86	9	2	Northern .....	74	254	253
Maine Central, (late Portland and Kennebeck).....	118	1	1	Northern Central .....	64	3502	.....
Maine Central .....	140	115	5	Northern Pacific .....	281	13838	28005
Maine Central, (late Portland and Kennebeck).....	181	1	1	Do .....	311	.....	43001
Do .....	352	201	11	North Missouri. (See Saint Louis, Kansas City and Northern.)	152	2404	.....
Maine Central, (Belfast division)	371	9a	3	North Pennsylvania .....	373	2404	.....
Manchester and Lawrence .....	96	627	622	Do .....	399	5240	.....
Maryland and Delaware .....	358	3403	.....	Northwestern North Carolina ..	263	2425	.....
Marysville and Lexington.....	328	9843	20016	Ogdensburgh and Lake Champlain. (See Central Vermont.)	357	1043	1252
Memphis and Charleston.....	94	6605	.....	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley) ..	424	2470	.....
Memphis, Clarksville and Louisville .....	105	10009	19009	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley) ..	101	711	653
Michigan Central .....	51	12506	24005	Do .....	110	609	690
Do .....	230	12511	24010	Old Colony and Newport .....			
Do .....	455	11413	23022				
Midland Pacific .....	199	14483	34005				
Milwaukee and Saint Paul. (See Chicago, Milwaukee and Saint Paul.)							

## Index to Table F—Continued.

Title.	Order.	Number of routes.	New number of route.	Title.	Order.	Number of routes.	New number of route.
Old Colony and Newport .....	353	654	634	Richmond and York River .....	403	4408	.....
Old Colony and Newport, operating Cape Cod .....	354	.....	737	Richmond, Fredericksburgh and Potomac .....	85	4401	.....
Old Colony and Newport .....	441	655	635	Rockford, Rock Island and Saint Louis .....	221	11429	2305
Orange, Alexandria and Manassas. (See Washington City, Virginia Midland and Great Southern.)				Rome, Watertown and Ogdensburgh .....	120	1026	127
Oswego and Syracuse .....	172	1029	1256	Do .....	267	1043	125
Owensborough and Russellville. (See Evansville, Owensborough and Nashville.)				Do .....	284	1024	125
Paducah and Gulf. (See Louisville and Nashville.)				Do .....	285	1026	125
Paducah and Memphis .....	447	10015	19014	Rutland and Burlington. (See Central Vermont.)			
Paris and Danville .....	423	11918	23050	Sacramento Valley .....	289	14705	4605
Pennsylvania .....	7	2103	.....	Saginaw Valley and Saint Louis .....	438	12949	2430
Do .....	8	2104	.....	Saint Croix and Penobscot .....	387	84	4
Do .....	11	2401	.....	Saint Joseph and Denver City .....	331	14004	3004
Do .....	71	2422	.....	Saint Louis and Iron Mountain and Cairo and Fulton .....	217	10502	2002
Do .....	147	2422	.....	Saint Louis and Southeastern. (See Saint Louis and Southeastern Consolidated.)			
Do .....	218	2116	.....	Saint Louis and Southeastern Consolidated, (late Edgefield and Kentucky) .....	148	10002	1302
Do .....	257	2427	.....	Saint Louis and Southeastern Consolidated, (late Saint Louis and Southeastern) .....	150	11900	2372
Do .....	270	2440	.....	Do .....	157	96122	2372
Do .....	275	2436	.....	Do .....	394	11900	2372
Do .....	286	2439	.....	Saint Louis, Council Bluffs and Omaha. (See Brunswick and Chillicothe and Saint Louis, Council Bluffs and Omaha.)			
Do .....	296	2443	.....	Saint Louis, Kansas City and Northern, (late North Missouri) .....	81	10704	2372
Do .....	308	2105	.....	Do .....	244	10507	2372
Do .....	351	2415	.....	Do .....	349	10509	2372
Do .....	407	2475	.....	Saint Paul and Pacific .....	261	13507	2372
Do .....	415	2105	.....	Do .....	365	13440	2372
Do .....	417	9048	.....	Saint Paul and Sioux City .....	225	13505	2372
Pennsylvania, (late Pennsylvania and Delaware) .....	454	2488	.....	Savannah and Charleston .....	149	5606	.....
Pennsylvania .....	456	2109	.....	Savannah and Memphis .....	443	6616	.....
Do .....	458	2131	.....	Sheboygan and Fond du Lac .....	322	13012	2372
Pennsylvania Company .....	324	9047	.....	Shepaug, (late Shepaug Valley) .....	317	991	.....
Peoria and Rock Island .....	307	11428	23040	Shepaug Valley. (See Shepaug.)			
Peoria, Pekin and Jacksonville .....	241	11414	23038	Sioux City and Pacific .....	203	11011	2372
Do .....	338	11414	23038	South and North Alabama .....	143	6004	.....
Philadelphia and Baltimore Central .....	212	2408	.....	Do .....	167	6004	.....
Philadelphia and Reading .....	39	2476	.....	Do .....	247	6004	.....
Do .....	313	2414	.....	South Carolina .....	223	5605	.....
Do .....	337	2413	.....	Do .....	258	5605	.....
Do .....	342	2405	.....	Do .....	259	5605	.....
Do .....	381	2428	.....	Southern Central .....	312	1542	127
Do .....	430	2451	.....	Southern Pacific .....	219	14702	4002
Do .....	445	2460	.....	Do .....	244	14945	4002
Do .....	461	2407	.....	Do .....	422	14702	4002
Do .....	465	2477	.....	Southern Railway Security Company .....	414	10005	1472
Philadelphia, Wilmington and Baltimore .....	10	3501	.....	South Shore .....	329	650	67
Do .....	146	3401	.....	Southwestern .....	254	6015	.....
Pittsburgh and Connellsville .....	204	2464	.....	Spartanburgh and Union .....	400	5610	.....
Do .....	347	2464	.....	Staten Island .....	383	1005	125
Pittsburgh, Cincinnati and Saint Louis .....	41	9036	.....	Stonington and Providence .....	112	502	7
Do .....	175	9012	.....	Sullivan. (See Central Vermont.)			
Do .....	239	12009	22009	Suncook Valley .....	378	342	32
Do .....	246	12013	22013	Syracuse Northern .....	346	1577	127
Do .....	277	2456	.....	Taunton Branch. (See New Bedford.)			
Portland and Keenebeck (See Maine Central.)				Texas, Mississippi River and Northwestern, (late Little Rock, Pine Bluff and New Orleans) .....	428	7223	.....
Portland and Ogdensburgh .....	128	521	410	Toledo, Peoria and Warsaw .....	279	11411	2372
Portland and Rochester .....	276	117	7	Do .....	413	11411	2372
Portland, Saco and Portsmouth. (See Eastern.)				Toledo, Wabash and Western .....	21	9023	.....
Portsmouth, Great Falls and Conway .....	298	309	280	Do .....	23	9023	.....
Providence and Worcester .....	153	801	801	Do .....	100	11426	.....
Providence, Warren and Bristol .....	318	803	803				
Quincy, Missouri and Pacific .....	322	105202	22019				
Raleigh and Augusta Air-Line .....	356	5216	.....				
Richmond and Danville .....	125	4407	.....				
Do .....	126	5004	.....				
Do .....	245	5004	.....				

Index to Table F—Continued.

Title.	Order.	Number of route.	New number of route.	Title.	Order.	Number of route.	New number of route.
Toledo, Wabash and Western ...	182	9022	.....	Vermont Valley. (See Central Vermont.)			
Do .....	195	11903	23025	Washington City, Virginia Midland and Great Southern, (late Orange, Alexandria and Manassas) .....	30	4403	.....
Do .....	291	9022	.....	Western Union .....	252	13003	25013
Do .....	393	11903	23025	West Jersey .....	151	2110	.....
Do .....	395	11427	23024	West Wisconsin .....	173	13014	25014
Troy and Boston .....	134	1017	1259	Do .....	464	13014	25014
Do .....	370	1017	1259	Whitehall and Plattsburgh .....	392	1518	1280
Union Pacific .....	15	14401	34001	Whitewater Valley .....	282	9035	.....
Utah Central .....	213	16633	41001	Wilmington and Reading .....	402	2455	.....
Utica and Black River .....	274	{1025}	1283	Wilmington and Western .....	449	3405	.....
Utica, Ithaca and Elmira .....	278	1566	1269	Wisconsin Central, operated by Phillips & Colby Construction Company .....	209	13396	25016
Vermont and Canada. (See Central Vermont.)				Do .....	251	13018	25017
Vermont and Massachusetts ....	93	690	646	Do .....	303	13018	25017
Do .....	98	690	646	Do .....	446	13018	25017
Do .....	420	690	646	Do .....	421	13019	25022
Vermont and Massachusetts. (See Central Vermont.)				Wisconsin Valley .....	158	683	643
Vermont Central. (See Central Vermont.)				Worcester and Nashua .....			
Vermont Central & Vermont & Canada. (See Central Vermont.)							

F.—Table showing the re-adjustment, under the act of March 3, 1873, of the rates of pay per upen returns of the weight of the mails, the speed with which they are conveyed, the

[ABBREVIATIONS.—f. f., fixtures and furniture; f. f. c., fixtures and furniture complete; m. c., mail line; t. l., triple line; q. l., quadruple line; r. a., route-agents; m. m., mail messenger. A number form being inconvenient. The figures in parentheses in the "Remarks" column refer to the order

Order	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	Pounds.	
1	N. Y..	1001	1201	New York, Dunkirk..	Erie.....	459	39,170	3
2	Ohio ..	9008	.....	Elyria, Millbury.....	Lake Shore and Michigan Southern.	74.98	39,057	3
3	Mass..	605	605	Boston, Springfield...	Boston and Albany.....	101	37,442	3
4	N. Y..	1079	1217	Albany, Buffalo.....	New York Central and Hudson River.	298	32,378	3
5	N. Y..	1002	1211	New York, Troy.....	.....do.....	150	31,992	3
6	Ohio ..	12501½	9049	Toledo, Elkhart.....	Lake Shore and Michigan Southern.	133.60	28,629	3
7	N. J ..	2103	.....	New York, New Brunswick.	Pennsylvania.....	36	27,997	3
8	N. J ..	2104	.....	New Brunswick, Philadelphia.	.....do.....	54	27,360	3
9	{ N. Y. 1039 Ohio. 9004 Ohio. 9021 Mich. 12501 }	{ 1241		Buffalo, Chicago.....	{ Lake Shore and Michigan } Southern.	543.85	25,792	3
10	Md ...	3501	.....	Baltimore, Philadelphia.	Philadelphia, Wilmington and Baltimore.	100	17,942	3
11	Pa.....	2401	.....	Philadelphia, Pittsburgh.	Pennsylvania.....	353.60	21,647	3
12	Mass..	605	605	Springfield, Albany..	Boston and Albany.....	102	17,773	3
13	N. Y..	1038	1208	Buffalo, Hornellsville	Erie.....	91	16,634	3
14	Md ...	3504	.....	Washington, Wheeling.	Baltimore and Ohio.....	353	11,403	3



*mile on certain railroad routes, and on certain new routes the adjustment of the rates, based accommodations provided for mails and agents, and the number of trips per week.*

catchers; r. p. o., railway post-office; apt., apartment; b. c., baggage-car; s. l., single line; d. l., double followed by an asterisk (\*) shows the equivalent in round trips, a more particular statement in tabular of the routes in this table.]

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
<i>Feet and inches.</i>		<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>			
r. p. o., 50 by 9.6, f. f. c., d. l.; r. a. apt., 42 by 11, 26 by 11, 16 by 11, f. f. c., s. l. 66 m.	20½*	705 00	375 00	323,595 00	172 500 00	July 1, 1873	1 mile decrease.	1
r. p. o., 51.6 by 10.9, f. f. c., m. c., d. l.	26	705 00	50 00	52,860 90	3,749 00	July 1, 1873	.....	2
r. p. o., (average,) 30.5 by 8.8, f. f., q. l.	26	680 00	375 00	68,620 00	37,875 00	July 1, 1873	Part; residue \$396.50, (12.)	3
r. p. o., 48 by 9, f. f. c., d. l. to Rochester, 229 m., s. l. residue, 69 m.	34*	602 00	375 00	177,326 00	111,750 00	July 1, 1873	69 miles now at \$572.	4
r. p. o., 48 by 9, f. f. c., d. l.	54*	597 00	375 00	89,550 00	56,250 00	July 1, 1873	.....	5
r. p. o., 51.6 by 10.9, f. f. c., m. c., d. l.	26	575 00	75 00	76,820 00	10,020 00	July 1, 1873	Formerly in Michigan section.	6
r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 11 by 8.5, f. f., 2½ l.	65½*	567 00	375 00	20,412 00	13,500 00	July 1, 1873	.....	7
r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 11 by 8.5, f. f., d. l.	84½*	558 00	375 00	30,132 00	20,250 00	July 1, 1873	.....	8
r. p. o., 51.6 by 10.9, f. f. c., d. l., 319.7 m., (Buffalo to Elyria, Millbury to Toledo, and Elkhart to Chicago,) with additional r. p. o., 41 by 10.9, f. f. c., s. l., 1357.5 m., (Cleveland to Chicago.)	23½*	523 64	375 00	234,762 25	203,943 75	July 1, 1873	{ Routes consolidated from 1st Jan., 1874, reducing distance to 542 miles and pay to \$283,833.50, 135.2 miles at \$565, 184.5 miles at \$540, and 222.3 miles at \$485; average, \$523.67. }	9
r. p. o., 50 by 9, f. f., d. l.; r. a. apt., 24 by 9, f. f., q. l. to Lamoikin, 14½ m., d. l. to Wilmington, 13½ m., and s. l. residue, 72 m.	25½*	440 00	375 00	44,000 00	37,500 00	July 1, 1873	.....	10
r. p. o., 46 by 8.4, f. f. c., s. l.; r. a. apt., 10.9 by 8, f. f. c., s. l.	40½*	438 00	375 00	154,876 80	132,600 00	July 1, 1873	.....	11
r. p. o., (average,) 30.5 by 8.8, f. f., d. l.	13	396 50	300 00	40,433 00	30,600 00	July 1, 1873	Part; residue \$680, (3.)	12
r. p. o., 42 by 11, 26 by 11, 16 by 11, (average, 28 by 11,) f. f. c., s. l.	22½	362 50	375 00	32,987 50	34,125 00	July 1, 1873	.....	13
r. p. o., 52.4 by 8.9, f. f., d. l. to Grafton, 254 m., s. l. residue, 99 m.; r. a. apt., 17 by 8.7½, f. f., s. l. between Grafton and Wheeling, 99 miles.	18*	360 00	285 00	123,120 00	100,605 00	July 1, 1873	99 miles at \$320 .....	14

F.—Table showing the re-adjustment, under the act of March 3, 1873.

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	Pounds.	
14a	W. Va.	4102	.....	Grafton, Parkersburgh.	Baltimore and Ohio.....	104	9,096	26
15	Nebr..	14401	34001	Omaha, Ogden .....	Union Pacific.....	1,032.20	10,963	26
16	Mass..	601	601	Boston, Portsmouth..	Eastern .....	56.50	8,669	24
17	Me....	114	124	Portland, Portsmouth	Eastern, (late Portland, Saco and Portsmouth.)	52	7,683	24
18	Ill ....	11404	23015	Chicago, Davenport ..	Chicago, Rock Island and Pacific.	183	9,293	27
19	N. Y..	1035	1207	Attica, Corning .....	Erie.....	111	10,886	30
20	Ill ....	11403	23003	Chicago, Clinton .....	Chicago and Northwestern....	139	7,793	24
21	Ohio ..	9022	.....	La Fayette, Quincy ..	Toledo, Wabash and Western	278	7,701	24
22	Ill ....	11405	23007	Chicago, Burlington..	Chicago, Burlington and Quincy.	207.70	7,643	24
23	Ind ...	12003	22003	Indianapolis, Cincinnati.	Indianapolis, Cincinnati and La Fayette.	113.50	7,241	26
24	Ill ....	11405	23007	Chicago, Burlington..	Chicago, Burlington and Quincy.	207.70	6,916	26
25	Va....	4401	.....	Washington, Richmond.	Richmond, Fredericksburgh and Potomac.	131	6,180	30
26	Ind ...	12028	22028	La Fayette, Kankakee	Cincinnati, La Fayette and Chicago.	57.35	6,806	25
27	Ind ...	12005	22005	Indianapolis, La Fayette.	Indianapolis, Cincinnati and La Fayette.	654	6,797	26
28	Ohio ..	9022	.....	Toledo, La Fayette..	Toledo, Wabash and Western	196	7,701	24
29	Ill ....	11403	23063	Clinton, Council Bluffs.	Chicago and Northwestern....	351	6,369	24
30	Va....	4403	.....	Alexandria, Lynchburgh.	Washington City, Virginia Midland and Great Southern, (late Orange, Alexandria and Manassas.)	171	7,059	21
31	Iowa..	11005	27014	Davenport, Missouri River.	Chicago, Rock Island and Pacific.	318	6,614	24
32	Pa ....	2749	.....	Easton, Allentown ...	Lehigh Valley.....	16.58	7,490	25
33	Tenn .	10001	19001	Knoxville, Bristol....	East Tennessee, Virginia and Georgia.	130.70	6,542	17
34	Tenn .	10002	19002	Knoxville, Chattanooga.	.....do.....	112	6,549	15
35	Va....	4414	.....	Lynchburgh, Bristol.	Atlantic, Mississippi and Ohio.	205	6,322	19
36	Mo ...	10505	22005	Quincy, Saint Joseph.	Hannibal and Saint Joseph ....	203.50	6,020	22

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of car or a- ment,		Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.			
Feet and inches.		Dolla.	Dolla.	Dolla.	Dolla.		
r. p. o., 52.4 by 8.9, f. f., d. l.	14	338 00	175 00	34,320 00	12,200 00	July 1, 1873	14a
r. p. o. (say.) 50 by 9, f. f. c., a. l.	7	315 00	275 00	325,143 00	283,855 00	July 1, 1873	r. p. o., with plat- forms, 54.5 by 9.9. 15
r. p. o., 40 by 8.9, f. f. d. l., r. a. apt., 22 by 8, f. f., a. l.	30½	295 00	200 00	16,607 50	11,300 00	July 1, 1873	16
r. p. o., 40 by 8.9, f. f., d. l., r. a. apt., 22 by 9, f. f., a. l.	■	283 00	175 73	14,716 00	9,137 44	July 1, 1873	17
r. p. o., 46.6 by 10, a. l. 129 m., d. l. 24 m.	12	280 00	200 00	51,840 00	36,600 00	July 1, 1873	24 miles at \$305 from 1st Dec., 1873. 18
42 by 11, 28 by 11, 16 by 11, f. f. c., a. l.	19½	275 00	300 00	36,525 00	33,300 00	July 1, 1873	19
r. p. o., (say.) 50 by 10, f. f., a. l.	19½	275 00	200 00	32,325 00	27,800 00	July 1, 1873	Part; residue \$255, (29.) r. p. o., with platforms, 56 by 10. Pay for 256 miles; 23 miles, Camp Point to Quincy, covered by route 11417, omitted in re-adjustment. Part, residue, \$255, (28.) 20
r. p. o., 50.2 by —, f. f., a. l.	12	273 00	225 00	69,826 03	62,550 00	July 1, 1873	21
r. p. o., (say.) 50 by 9, f. f. c., a. l.	30½	273 00	265 00	56,702 10	53,070 50	Jan. 1, 1874	r. p. o., with plat- forms, 56 by 9. Company report r. p. o. 53.6 by 9.6 from Mar. 30, 1874. 22
r. p. o., 50 by —, f. f. c., r. a. apt., 12 by 7.5, f. f., a. l.	19	268 00	150 00	30,412 00	17,025 00	Oct. 14, 1873	23
r. p. o., (say.) 50 by 9, f. f. c., a. l.	20½	265 00	225 00	55,040 50	46,738 50	July 1, 1873	Main route; branch- es \$50. 24
r. p. o., 43 by —, f. f. c., d. l.	13	265 00	200 00	34,715 00	26,200 00	July 1, 1873	25
r. p. o., 50 by 10, f. f. c., a. l.; r. a. apt., 10 by 8, 8 by 8, f. f., a. l.	13	262 00	150 00	15,025 70	8,602 50	Oct. 14, 1873	18.4 miles covered by route 11916. 26
r. p. o., 50 by —, f. f. c., a. l.; r. a. apt., 12 by 7.5, f. f., a. l.	19	261 00	150 00	17,193 75	9,643 75	Oct. 14, 1873	27
r. p. o., 36 by —, f. f., a. l.	12	255 00	225 00	50,490 00	44,350 00	July 1, 1873	Part; residue \$273, (31.) Branches \$80 (189) and \$82, (301.) 28
r. p. o., (say.) 50 by 10, f. f., a. l.	18	255 00	200 00	69,505 00	70,300 00	July 1, 1873	Part, residue \$275, (30.) r. p. o., with platforms, 56 by 10. 29
r. p. o., 42.3 by —, f. f. c., a. l.	13	250 00	225 00	42,750 00	38,475 00	July 1, 1873	30
r. p. o., 46.6 by 10, d. l. 54 m., a. l. residue.	12	250 00	150 00	60,650 00	47,700 00	July 1, 1873	54 miles now at \$275. 31
22 by 8.6, f. f., 24 lines.	35*	246 00	200 00	4,076 68	4,974 00	July 1, 1873	32
40.6 by 9.6, f. f., a. l.	14	244 00	225 00	31,806 80	29,407 50	July 1, 1873	33
r. p. o., 40.6 by 9.6, f. f., a. l.	14	244 00	225 00	27,328 00	25,200 00	July 1, 1873	Main route; branch \$100. 34
r. p. o., 40.5 by 9, f. f. c., a. l.	14	240 00	200 00	49,200 00	46,125 00	July 1, 1873	35
r. p. o., 40 by 9.10, a. l.	12	237 50	175 00	46,331 25	35,612 50	July 1, 1873	Main route; branch \$75, (236.) 36

F.—Table showing the re-adjustment, under the act of March 3, 1878.

Route.	No.	Termini.	Corporate title of company carrying the mail.	Length of route.		Average weight of mails whole distance per day.	Miles per hour.
				Miles.	Pounds.		
..		Cleveland, Cincinnati.	Cleveland, Columbus, Cincinnati and Indianapolis.	245.25	5,964	2	
11		San Francisco, Ogden	Central Pacific .....	277.50	5,296	2	
..		Allentown, Harrisburgh.	Philadelphia and Reading .....	90	7,507	2	
10		Kansas City, Cameron	Hannibal and Saint Joseph .....	54	5,411	2	
..		Columbus, Pittsburgh	Pittsburgh, Cincinnati and Saint Louis.	160	2,425	2	
18		Springfield, South Vernon Junction.	Connecticut River .....	50	5,409	2	
12		Milwaukee, La Crosse	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	190	5,257	2	
11		Concord, Nashua .....	Concord .....	36	5,016	2	
2		Waterville, Bangor ..	Maine Central .....	55	2,025	2	
1		Sedalia, Dennison ...	Missouri, Kansas and Texas ...	447	4,000	2	
14		Boston, Fitchburgh ..	Fitchburgh .....	52	5,790	2	
11		Chicago, Milwaukee ..	Chicago and Northwestern .....	87	3,263	2	
4		Hannibal, Sedalia ...	Missouri, Kansas and Texas ...	142.00	3,454	2	
50	N. Y. ..	1282 1218 Rochester, Niagara Falls.	New York Central and Hudson River.	76	4,051	2	
51	Mich. .	12508 24005 Detroit, Chicago .....	Michigan Central .....	203.25	3,972	2	
22	Ohio ..	9031 .....	Cincinnati, Xenia ...	65.96	5,056	2	
53	Ohio ..	9016 .....	Columbus, Xenia .....	55	5,365	2	
54	Ill. ....	11402 23002 Chicago, Freeport .....	Chicago and Northwestern .....	121	4,280	2	
55	Me ...	115 5 Portland, Augusta ..	Maine Central, (late Portland and Kennebeck.)	64	4,007	2	
56	Wis. ..	13001 25000 Chicago, Green Bay ..	Chicago and Northwestern .....	245	3,207	2	
57	Wis. ..	13017 25012 Winona, Winona Junction.	.....do .....	26	4,097	2	
58	Ky ...	9608 20005 Louisville, Nashville.	Louisville and Nashville .....	106.6	4,252	2	
59	Minn. .	11513 26013 Saint Paul, Winona ..	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	103.24	3,925	2	
60	Mass. .	603 603 Boston, Nashua .....	Boston and Lowell and Nashua and Lowell.	42	3,426	2	
61	Vt. ....	487 407 Brattleborough, Bellows Falls.	Central Vermont, (late Vermont Valley.)	24	4,000	2	
62	Vt. ....	481 405 Bellows Falls, Windsor.	Central Vermont, (late Sullivan.)	25	4,772	2	
63	Tenn. .	10004 19004 Stevenson, Chattanooga.	Nashville, Chattanooga and Saint Louis, (formerly Nashville and Chattanooga.)	39	4,301	2	
64	Md. ...	3502 .....	Baltimore, Sudbury ..	140	3,786	2	
65	Ky ...	2607a 20004 Covington, Louisville	Louisville, Cincinnati and Lexington.	108.25	3,478	2	
66	.....	.....	.....	.....	.....	.....	

## 159

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
<i>Feet and inches.</i>		<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>			
r.p.o., 39.2 by 9.2, f.f.c., s.l.	12	237 00	225 00	58,124 25	55,181 25	July 1, 1873	.....	37
r.p.o., 48 by 9.5½, f.f.c., s.l.	7	233 00	275 00	204,457 50	241,312 50	July 1, 1873	.....	38
11.6 by 8.8, f.f., s.l.	21*	232 00	300 00	20,880 00	27,000 00	July 1, 1873	.....	39
r.p.o., 40½ by 9.10 s. l.	13	232 00	125 00	13,253 00	7,480 00	July 1, 1873	\$730 ferriage.....	40
15 by 8.6, f.f. and m.c., s.l.	23	230 00	275 00	36,800 00	40,000 00	July 1, 1873	.....	41
r.p.o., 23.4 by 6.5, 20.9 by 6.9½, f.f., d.l.	16½*	230 00	150 00	11,800 00	7,800 00	July 1, 1873	\$300 for mail-messenger.	42
r.p.o., 40 by 10.3, s.l.	12	230 00	150 00	45,540 00	29,700 00	July 1, 1873	.....	43
22¾ by 6.11, f.f., s.l.; r.a. apt., 17 by 7, 12 by 6.8, f.f., d.l. 18 m.	33*	225 00	150 00	8,100 00	5,400 00	July 1, 1873	.....	44
r.p.o., 42 by 9, f.f., d.l.	12	225 00	125 00	12,375 00	6,875 00	July 1, 1873	Part; residue \$175, (86.)	45
r.p.o., 51.2 by 9.10, f.f., s.l.	6	223 00	150 00	99,681 00	67,050 00	July 1, 1873	.....	46
r.p.o., 25 by 8, 15 by 7, 12 by 7, 12 by 6.9, 11 by 6.6, (average 15 by 7.) f.f., s.l.	18	220 00	175 00	11,440 00	9,100 00	July 1, 1873	.....	47
r.p.o., 42.6 by 10, d.l.	24	220 00	175 00	19,140 00	15,225 00	July 1, 1873	.....	48
r.p.o., 51-2 by 9.10, f.f., s.l.	6	215 00	175 00	30,719 20	25,004 00	Aug. 3, 1873	.....	49
r.p.o., 48 by 9, f.f.c., s.l.	24	214 00	250 00	16,264 00	19,000 00	.....	.....	50
r.p.o., (say) 45 by 10.6 s.l.	33½	212 50	175 00	60,615 62	49,918 75	July 1, 1873	.....	51
5.6 by 8.6, f.f., s.l.	24	210 00	225 00	13,851 60	14,625 00	July 1, 1873	Part; residue \$50, (403.) 0.96 m. increase.	52
.....do .....	24	210 00	325 00	11,550 00	17,875 00	July 1, 1873	.....	53
r.p.o., 43.4 by 10, s.l.	12	210 00	150 00	25,410 00	18,150 00	July 1, 1873	.....	54
r.p.o., 42 by 9, f.f.c., s.l.; r.a. apt., 16 by —, f.f.c., s.l.	12	210 00	113 35	13,440 00	7,254 40	July 1, 1873	Main route; branch \$120, (140.)	55
r.p.o., (say) 50 by 10, f.f.c., s.l.	14½*	210 00	175 00	51,450 00	42,875 00	July 1, 1873	.....	56
r.p.o., (say) 40 by 10.3, f.f.c., s.l., and r.a. on w.t.	12	209 00	50 00	5,852 00	1,400 00	July 1, 1873	.....	57
r.p.o., 31.8 by 9.3, f.f., s.l.; r.a. apt., 14.10 by 7.6.	34½*	207 50	175 00	38,719 50	32,655 00	July 1, 1873	.....	58
p.o., (say) 40 by 10.3, f.f.c., s.l.	12	207 00	200 00	21,494 88	20,768 00	July 1, 1874	r.p.o., with platforms, 46 by 10.3.	59
2 by 9.6, f.f. and m.c., s.l.	18	205 00	150 00	8,610 00	6,300 00	July 1, 1873	.....	60
2.6 by 9.3, f.f., d.l.	12	205 00	140 00	4,920 00	3,360 00	July 1, 1873	.....	61
.....do .....	12	205 00	140 00	5,125 00	3,500 00	July 1, 1873	.....	62
p.o., 23 by 9.10, f.f.c., s.l.	10½*	205 00	200 00	7,995 00	7,800 00	July 1, 1873	Part; residue \$145, (114;) branch \$50, (389.)	63
p.o., 40 by 8.6, f.f., s.l.; r.a. apt., 14.6 by 8.6, f.f., s.l.	18	204 00	300 00	28,560 00	42,210 00	July 1, 1873	.....	64
by 7.3, f.f., s.l.	12	200 00	150 00	21,650 00	16,237 50	July 1, 1873	.....	65
.....	.....	.....	.....	.....	.....	.....	Vacant .....	66

F.—Table showing the re-adjustment, under the act of March 3, 1878.

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	Pounds.	
67	Minn.	13513	26013	Saint Paul, Winona..	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	103.84	3,925	2
68	Iowa..	11003	27005	Burlington, East Plattsburgh.	Burlington and Missouri River.	279.14	3,445	2
69	Ill....	11406	23017	Chicago, East Saint Louis.	Chicago and Alton .....	283	3,510	2
70	Ill....	11407	23020	Chicago, Cairo .....	Illinois Central .....	365	2,940	2
71	Pa....	2422	.....	Sunbury, Williamsport.	Pennsylvania .....	39.9	2,720	2
72	Vt....	461	403	White River Junction, Essex Junction.	Central Vermont, (late Vermont Central.)	93	3,734	2
73	Kans..	14001	33001	Kansas City, Cheyenne.	Kansas Pacific .....	745	4,457	2
74	N. H..	254	253	Concord, White River Junction.	Northern .....	69	3,930	2
75	Ill....	11417	23010	Galesburgh, Quincy..	Chicago, Burlington and Quincy	103	2,850	2
76	Mass..	690	744	Miller's Falls, Brattleborough.	Central Vermont, (late Vermont and Massachusetts.)	21	3,712	2
77	Ohio..	9030	.....	Cincinnati, Hamilton.	Cincinnati, Hamilton and Dayton.	26.53	3,629	2
78	Vt....	412	401	Essex Junction, Saint Albans.	Central Vermont, (late Vermont Central and Vermont and Canada.)	24½	3,905	2
79	Ohio..	9018	.....	Galion, Indianapolis..	Cleveland, Columbus, Cincinnati and Indianapolis.	204	2,519	2
80	Vt....	482	406	Rutland, Burlington.	Central Vermont, (late Rutland and Burlington.)	67½	3,953	2
81	Mo....	10504	28004	Saint Louis, Kansas City.	Saint Louis, Kansas City and Northern, (formerly North Missouri.)	271.73	3,736	2
82	Ill....	11407	23020	Chicago, Cairo .....	Illinois Central.....	365	2,940	2
83	Vt....	461	403	Windsor, White River Junction, Essex Junction, Burlington.	Central Vermont, (late Vermont Central.)	26	3,734	2
84	Ill....	11921	23035	Chicago, Milwaukee..	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	88.85	4,556	2
85	Conn..	936	904	New Haven, New London.	New York, New Haven and Hartford.	50	3,716	2
86	Me....	9	2	Danville Junction, Waterville.	Maine Central.....	55	3,625	2
87	Me....	181	9	Bangor, New Brunswick.	Consolidated European and North American.	118.25	3,456	2
88	Mo....	10515a	28014	Hannibal, Sedalia .....	Missouri, Kansas and Texas...	142.88	3,454	2



of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
<i>Feet and inches.</i>		<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>			
r. p. o., (avg) 40 by 10.3, f. f. c., s. l.	12	200 00	50 00	20,768 00	5,192 00	Mar. 4, 1872	Ordered April 1874, to June 30, 1874.	67
r. p. o., 42 by 8.6, s. l.	12	200 00	175 00	55,828 00	42,849 50	July 1, 1873	Main route; branch \$60, (325.)	68
r. p. o., 32 by 10, f. f. c. and m. c., s. l.; r. a. apt., 24 by 10, f. f. c., s. l.	12	195 00	200 00	55,185 00	56,600 00	July 1, 1874	.....	69
r. p. o., 50 by 10, 26.8 by 9, f. f., d. l. to Kankakee, 55 m, s. l. residue, 310 miles, to July 7, 1874; r. p. o., 50 by 10, 45 by 10, f. f. c., d. l. to Kankakee, s. l. residue, from July 8, 1874.	12	195 00	180 00	73,375 00	67,900 00	July 8, 1874	55 miles at \$235, formerly \$220.	70
r. p. o., 40 by 9.6, 45 by 9.6, f. f. c., s. l.; r. a. apt., 8.10 by 5.7, f. f., d. l.	18	195 00	150 00	7,761 00	5,970 00	July 1, 1873	Part; residue \$114, (147.)	71
r. p. o., 24 by 9.7, 25 by 9.7, f. f. c., s. l.	13	193 00	175 00	17,949 00	16,275 00	July 1, 1873	Part; residue \$178, (83.)	72
4.3 by 10.6, f. f., s. l.	9½	190 00	150 00	141,550 00	111,750 00	July 1, 1873	Main route; branch \$90, (184.)	73
r. p. o., 22.3½ by 6.11, f. f., s. l.	18	190 00	140 00	14,260 00	10,510 00	July 1, 1873	\$1,150 for mail-messenger; formerly \$850.	74
r. p. o., (avg) 50 by 9.50 by 9.36 by 9, (average 45.4 by 9,) f. f. c., s. l.	18	190 00	160 00	19,000 00	16,000 00	July 1, 1873	r. p. o., with platforms, 58.6 by 9.	75
15 by 7, f. f., d. l. . .	18	187 50	100 00	3,937 50	2 100 00	July 1, 1873	Part of 690, old. . . . .	76
12 by 8, f. f., d. l. . .	43	187 50	175 00	4,974 37	4,642 75	July 1, 1873	Part; residue \$150 . .	77
r. p. o., 24 by 9.7, f. f. c., s. l.	18	185 00	175 00	4,532 50	4,287 50	July 1, 1873	Part; residue \$170, (92.)	78
r. p. o., 39.2 by 9.2, f. f. c., s. l.	12	185 00	200 00	37,740 00	40,800 00	July 1, 1873	.....	79
5 by 9.3, f. f., s. l.	12	182 00	180 81	12,285 00	12,204 67	July 1, 1873	Part; residue \$157, (102.)	80
14 by 7.6, f. f., s. l., 2 agts. 58 m.	19½	180 00	175 00	48,915 00	47,556 25	July 1, 1873	.....	81
r. p. o., 50 by 10, 26.8 by 9, f. f., d. l. to Kankakee, 55 miles, s. l. residue, 310 m.	12	180 00	115 35	65,700 00	42,100 00	July 1, 1873	55 miles at \$230, from Oct. 29, 1873.	82
5 by 9.3, 13.7 by 9.7, f. f., s. l.	12	178 00	175 00	4,628 00	4,550 00	July 1, 1873	Part; residue \$193, (72.)	83
r. a. . . . .	18	175 00	.....	.....	.....	Apr. 16, 1873	New. Ordered Dec., 1873.	84
26 by 6.9, f. f. c., m. c., s. l.; r. a. in h. c.	28*	175 00	150 00	8,817 00	7,567 00	July 1, 1873	\$67 mail-messenger	85
6 by —, f. f., s. l. . .	6	175 00	125 00	9,625 00	6,875 00	July 1, 1873	Part; residue \$225, (45.)	86
2 by 7, f. f., s. l. . .	9	175 00	125 00	20,693 75	14,781 25	July 1, 1873	.....	87
6 by —, f. f., s. l. . .	6	175 00	30 00	25,004 00	4,286 40	Aug. 1, 1873	To Aug. 2, 1873. . . . .	88

F.—Table showing the re-adjustment, under the act of March 3, 1873.

				Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Rate per letter.
					Miles.	Pounds.	
89	Vt ..	452	402	White River Junction, Derby Line.	Connecticut and Passumpsic Rivers and Massawippi Valley, (late Connecticut and Passumpsic Rivers.)	114.17	2.00 1
90	Ind .	12017	22017	Indianapolis, Peoria.	Indianapolis, Bloomington and Western.	212.20	1.75 4
91	Mass .	602	602	Boston, South Berwick Junction.	Boston and Maine.	75	2.25 3
92	Vt ..	412	401	Burlington, Essex Junction, Saint Albans, Rouse's Point.	Central Vermont, (late Vermont Central and Vermont and Canada.)	31	2.30 12
93	Mass	690	640	Fitchburgh, Shelburne Falls.	Vermont and Massachusetts.	69	2.64 13
94	Ala..	6005	.....	Memphis, Stevenson	Memphis and Charleston	371.50	2.00 2
95	Ohio .	9017	.....	Columbus, Indianapolis.	Columbus, Chicago and Indiana Central.	188	2.45 13
96	Mass	627	622	Lawrence, Manchester.	Manchester and Lawrence.	28	2.13 2
97	Mass	689	645	Fitchburgh, Bellows Falls.	Cheshire and Ashuelot	64	2.72 5
98	Mass	690	646	Shelburne Falls, Hoosac Tunnel.	Vermont and Massachusetts	18	2.64 13
99	Conn	938	906	New Haven, Williamburgh.	New Haven and Northampton.	83	2.13 2
100	Ill ....	11426	23023	Decatur, Saint Louis	Toledo, Wabash and Western	112	2.51 5
101	Mass	731	633	South Braintree Junction, Fall River.	Old Colony and Newport	34	2.50 3
102	Vt....	422	406	Bellows Falls, Rutland.	Central Vermont, (late Rutland and Burlington.)	52	2.42 1
103	Ky ..	9611	20006	Bowling Green, Guthrie.	Louisville and Nashville, (late Paducah and Gulf)	51	2.30 2
104	Ill ....	11415	23009	Peoria, Galesburgh	Chicago, Burlington and Quincy	54	1.35 2
105	Tenn .	10009	19009	Guthrie, Paris	Memphis, Clarksville and Louisville.	92 1/2	2.27 4
106	Mass .	663	637	Middleborough, Hyannis.	Cape Cod	47	2.25 3
107	Ohio ..	9007	.....	Cleveland, Wellsville.	Cleveland and Pittsburgh	102.36	2.10 1
108	Ala..	6612	.....	Mobile, Montgomery	Mobile and Montgomery	170	2.25 1
109	N. Y .	1027	1213	Syracuse, Rochester	New York Central and Hudson River.	104	2.16 2
110	Mass .	600	600	Boston, Plymouth	Old Colony and Newport	32	2.03 2
111	Ohio	9027	.....	Dayton, Toledo	Dayton and Michigan	142.26	1.97 2
112	R. I .	802	804	Providence, New London	Stonington and Providence	63.75	1.80 1
113	Tenn	10010	19010	Memphis, Paris	Louisville and Nashville and Great Southern, (late Louisville and Nashville.)	132.50	1.90 2
114	Tenn	10034	19034	Nashville, Stevenson	Nashville, Chattanooga and Saint Louis, (formerly Nashville and Chattanooga.)	114	1.92 1
115	Mo .	10506	20006	Kansas City, Council Bluffs.	Kansas City, Saint Joseph and Council Bluffs.	203	1.31 2
116	Ill ..	11412	23021	Dubuque, Centralia	Illinois Central	344	1.52 2

of the rates of pay per mile on certain railroad routes, &amp;c.—Continued.

Station, of mail car or apart- ment	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.			Date of re-adjust- ment or adjust- ment.	Remarks.	Order
<i>Feet and inches.</i> p. o. 23 by 9, f. f. a. l.	6	Dolla. 175 00	Dolla. 100 00	Dolla. 19,978 73	Dolla. 11,417 00	July 1, 1873		88
r. p. o. (say) 50 by 10, f. f. c., m. o., a. l.	12	175 00	90 00	37,135 00	19,099 00	July 1, 1873	r. p. o., with plat- forms, 56 by 10.	90
10 by 6.10, f. f., d. l.	14	172 00	150 00	12,900 00	11,250 00	July 1, 1873		91
r. a. p. t. 35 by 9.3, a. l. 7 by 9.7, f. f., a. l.	12	170 00	175 00	5,270 00	5,425 00	July 1, 1873	Part; residue \$165, (78.)	92
15 by 7, f. f., d. l. . .	18	170 00	100 00	11,730 00	8,000 00	July 1, 1873	Part; residue \$180 and \$50, (92, 420.)	93
r. p. o., 23 by 9.10, f. f. c., a. l.	14	170 00	150 00	46,155 00	48,725 00	July 1, 1873		94
12 by 9, f. f., a. l. . . .	20	166 00	200 00	31,208 00	37,600 00	July 1, 1873		95
17 by 7 12 by 6.0, f. f., d. l.	18	163 00	100 00	4,584 00	2,800 00	July 1, 1873		96
24 by a. e., sixteen a. l.	18	160 00	117 18	10,240 00	7,500 00	July 1, 1873		97
15 by 7, f. f., a. l. . .	12	160 00	100 00	2,880 00	1,800 00	July 1, 1873	Part; residue \$170, \$50, (93, 420.)	98
12 by 10, f. f., d. l.	12	160 00	75 00	13,280 00	7,225 00	July 1, 1873	Main route; branch \$50, (397,) \$1,000 mail-messenger formerly.	99
9 by —, f. f., a. l. . .	12	158 00	150 00	17,696 00	16,800 00	July 1, 1873		100
26 by 9, f. f., m. c. d. l. to Mid- dlenborough, 25.07 miles, no r. a. residue.	12	158 00	50 00	6,372 00	1,700 00	July 1, 1873	\$1,000 mail-messen- ger.	101
by 9.3, f. f., a. l. . .	12	157 00	100 00	8,164 80	5,300 00	July 1, 1873	Part, residue \$182, (90.)	102
4.10 by 7.6, f. f., a. l.	19	156 00	150 00	7,956 00	7,450 00	July 1, 1873		103
p. o. (say) 50 by 9.50 by 9.36 by 9. average 45.4 (say) f. f. c., a. l.	12	155 00	130 00	8,370 00	7,090 00	Jan. 1, 1874	Weight in Nov., 1873; r. p. o., with plat- forms, 55.8 by 9, 55.6 by 9, 41 by 9.	104
17 by 10, f. f., a. l.	13	153 00	100 00	12,022 50	8,250 00	July 1, 1873		105
16 by 9, f. f., m. c. d. l. to Yar- mouth Junction, 41.24 miles no r. a. residue.	12	153 00	117 00	8,191 00	6,500 00	July 1, 1873	\$1,000 mail-messen- ger.	106
by 9, f. f., a. l. . .	15	152 00	150 00	15,558 72	15,354 00	July 1, 1873		107
3 by 8.84, f. f., a. l.	7	150 00	160 00	25,850 00	28,640 00	July 1, 1873		108
6 by 8.6, f. f. c. and b. c., (old report.)	214*	130 00	125 00	15,600 00	13,000 00	July 1, 1873		109
6 by 9, f. f., m. c. d. l. 11.28 miles; no r. a. residue.	234*	150 00	125 00	4,593 00	5,645 00	July 1, 1873	\$295 mail-messenger	110
by 9, f. f., a. l. . .	18	150 00	125 00	21,444 00	17,270 00	July 1, 1873		111
by 6, f. f., a. l. . .	224*	145 00	125 00	9,243 75	7,268 75	July 1, 1873		112
6 by 7.6, f. f., a. l.	13	145 00	150 00	19,212 50	19,875 00	July 1, 1873		113
by 9 9, f. f., a. l.	104*	145 00	150 00	16,530 00	17,100 00	July 1, 1873	Part; residue \$305, (63;) branch \$50, (389.)	114
p. o., 24.104 by 14.22 9 by 8.8, f. f. a. l.	12	143 00	140 00	29,029 00	28,420 00	July 1, 1873	Main route; branch \$60, (310.)	115
p. o., 28.1 by 9.6, f. f., a. l.	12	140 00	100 00	48,160 00	34,400 00	July 1, 1873		116

F.—Table showing the re-adjustment, under the act of March 3, 1873,

				Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	Pounds.	
				Road House, Mexico	Chicago and Alton.....	90	1,419	2
116	Me...	1	1	Augusta, Fairfield ...	Maine Central, (late Portland and Kennebeck.)	92	341	2
119	Me....	116	6	Portland, Canada Line.	Grand Trunk .....	165	1,773	2
120	N. Y..	1026	1237	Rome, Ogdensburgh ..	Rome, Watertown and Ogdensburgh.	142	1,768	3
121	Ind...	19007	22007	New Albany, Indianapolis.	Jeffersonville, Madison and Indianapolis.	114	1,671	2
122	Ala...	6613	.....	Mobile, New Orleans	New Orleans, Mobile and Texas	140	1,606	2
123	Ill....	11416	23018	Bloomington, Godfrey	Chicago and Alton .....	152	1,985	2
124	Ill...	11415	23009	Peoria, Galesburgh ..	Chicago, Burlington and Quincy	54	1,053	2
125	Va...	4407	.....	Richmond, Greensborough.	Richmond and Danville .....	190.50	1,725	1
126	N. C.	5004	.....	Charlotte, Greensborough.	.....do.....	93	1,519	1
127	Mich	12502	24001	Toledo, Detroit.....	Lake Shore and Michigan Southern.	64.75	2,477	2
128	Vt...	521	410	West Concord, Hyde Park.	Portland and Ogdensburgh....	52.93	2,261	2
129	N. Y..	1524	1279	Chatham Village, Rutland.	Central Vermont, (late Harlem Extension.)	111.30	1,636	2
130	N. Y.	1022	1242	Rouse's Point, Ogdensburgh.	Central Vermont, (late Ogdensburgh and Lake Champlain.)	119	1,624	2
131	N. H.	253	252	Concord, Wells River	Boston, Concord and Montreal	94	1,567	2
132	Wis	13004	25001	Milwaukee, North McGregor.	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	197.20	1,541	2
133	Cal...	14703	46003	Roseville Junction, Tehama.	California and Oregon .....	105	1,512	2
134	N. Y.	1017	1259	Troy, North Adams..	Troy and Boston .....	50	1,426	2
135	Ohio.	9015	.....	Columbus, Delaware	Cleveland, Columbus, Cincinnati and Indianapolis.	94.75	1,446	2
136	Mich.	12515	24015	Bay City, Monroe ...	Flint and Père Marquette ...	132	1,339	2
137	Conn	926	902	New London, Palmer	Central Vermont, (late Vermont Central.)	65	1,226	2
138	N. H..	253	254	Concord, Claremont Junction.	Concord and Claremont .....	54.90	1,207	2
139	Pa...	2410	.....	Allentown, Mauch Chunk.	Lehigh Valley .....	29.50	1,106	2
140	Me...	115	5	Brauswick, Bath ....	Maine Central, (late Portland and Kennebeck.)	9	1,073	2
141	Ohio.	9029	.....	Hamilton, Richmond	Cincinnati, Hamilton and Dayton.	45.10	1,363	2
142	Mass.	870	638	Yarmouthport, Wellfleet.	Cape Cod.....	31	1,174	2
143	Ala...	6604	.....	Montgomery, Calera	South and North Alabama ..	63.80	1,338	2
144	Ohio	9005	.....	Hudson, Columbus...	Cleveland, Mount Vernon and Delaware.	145.68	1,343	2
145	Pa...	2410	.....	Mauch Chunk, Wilkesbarre.	Lehigh Valley.....	55	1,100	2
146	Del...	2401	.....	Wilmington, Delmar	Philadelphia, Wilmington and Baltimore.	26.92	1,100	2
147	Pa...	2422	.....	Williamsport, Erie ..	Pennsylvania .....	247.60	1,122	2
148	Tenn	10008	19008	Nashville, Guthrie ..	Saint Louis and Southeastern, Consolidated, (formerly Edgefield and Kentucky.)	48	1,222	2
149	S. C.	5636	.....	Charleston, Savannah	Savannah and Charleston.....	104	1,229	2

of the rates of pay per mile on certain railroad routes, &amp;c.—Continued.

					Former amount of annual pay.	Date of re-adjust- ment or adjust- ment.	Remarks.	Order.
Feet and inches.		Dolla.	Dolla.	Dolla.	Dolla.			
r. p. o., 32 by 10, f. f. c., m. o., a. l.	6	140 00	50 00	12,600 00	4,300 00	July 1, 1873	.....	117
r. p. o., 42 by 9, d. l., r. a. apt., 16 by —, a. l.	18	140 00	75 00	3,080 00	1,650 00	July 1, 1873	Part; residue \$90, (161.)	118
23 by 8, f. f., a. l.	104*	138 00	100 00	22,770 00	17,700 00	July 1, 1873	48 miles formerly at \$125.	119
23 by 9, 23.6 by 7, fixtures, a. l.	15	138 00	115 00	19,596 00	16,330 00	July 1, 1873	Main route; branch \$62.50, (285.)	120
23 by 7.4, f. f., a. l.	18	134 00	150 00	15,276 00	17,100 00	July 1, 1873	.....	121
17 by 7, f. f., a. l. (space in through mail-car, 18 by 5.)	14	130 00	110 00	18,200 00	15,400 00	July 1, 1873	.....	122
r. p. o., 32 by 10, f. f. c., m. o., a. l. 111.4 miles; r. a. apt., 24 by 10, f. f. c., a. l. 40.6 m.	12	130 00	100 00	18,946 00	15,200 00	July 1, 1873	40.6 miles at \$110....	123
r. p. o., (say) 50 by 9, 50 by 9, 36 by 9, (average 45.4 by 9.) f. f. c., a. l.	12	130 00	65 00	7,090 00	3,510 00	July 1, 1873	Weight in Oct., 1873; r. p. o., with plat-forms, 55.6 by 9, 55.6 by 9, 41 by 9.	124
18.4 by 8.6, f. f., a. l.	16*	128 00	125 00	24,384 00	23,612 50	July 1, 1873	.....	125
21 by 8, f. f., a. l.	14	126 00	125 00	11,718 00	11,625 00	July 1, 1873	Part; residue \$75, (245.)	126
13 by 9, f. f., a. l.	6	125 00	125 00	8,093 75	6,475 00	July 1, 1873	.....	127
15 by 6.6, f. f., a. l.	6	125 00	125 00	7,366 25	2,946 50	July 1, 1873	.....	128
17.6 by 6.6, f. f., a. l.	6	125 00	60 00	13,912 00	6,676 00	July 1, 1873	Main route; branch	129
12.8 by 7.3.....	9*	125 00	125 00	14,875 00	10,710 00	July 1, 1873	.....	130
17 by 6.8, f. f., a. l.	13½*	125 00	100 00	11,750 00	2,300 00	July 1, 1873	1 mile increase.....	131
23 by 10, f. f., a. l.	12	125 00	150 00	24,650 00	29,580 00	July 1, 1873	.....	132
12.9 by 8.10, f. f. c., a. l.	7	125 00	75 00	13,125 00	7,875 00	July 1, 1873	.....	133
15.2 by 6.8, f. f., a. l.	20½*	121 00	125 00	6,550 00	6,250 00	July 1, 1873	Main route; branch \$50, (370.) \$500 mail-messenger.	134
b. c.; no r. a.	12	120 00	125 00	2,970 00	3,093 75	July 1, 1873	.....	135
21 by 8.10½, f. f., a. l.	14½*	120 00	75 00	15,840 00	9,900 00	July 1, 1873	.....	136
1.5 by 5.8, f. f., a. l.	20½*	120 00	100 00	7,800 00	5,625 00	July 1, 1873	35 miles formerly at \$75.	137
2 by 6.8, f. f., d. l.	12	120 00	57 00	6,508 80	3,179 37	July 1, 1873	.....	138
2 by 8.6, f. f., 2½ l.	18	120 00	125 00	3,540 00	2,950 00	July 1, 1873	Part, residue \$115, (145.) \$105, (160.)	139
2 by —, t. l.	18	120 00	113 35	1,080 00	1,020 15	July 1, 1873	Branch; main route \$210, (55.)	140
2 by 8, f. f., a. l.	12	118 00	110 00	5,321 80	4,961 00	July 1, 1873	.....	141
2.6 by 9, f. f., d. l.	12	118 00	100 00	7,658 00	5,800 00	July 1, 1873	\$4,000 mail-messenger; formerly \$2,700.	142
4.10 by 7.6, f. f., a. l.	12	117 50	100 00	6,496 50	6,380 00	July 1, 1873	Part; residue \$75	143
9 by 8.6, f. f., a. l.	9½*	117 00	55 00	17,067 96	5,537 49	July 1, 1873	.....	144
2 by 8.6, f. f., d. l.	12	115 00	100 00	6,325 00	5,500 00	July 1, 1873	Part, residue \$120, (139.) \$105, (160.)	145
2 by 9, f. f., d. l.	12	115 00	109 59	11,145 80	10,621 25	July 1, 1873	.....	146
10 by 5.7, f. f., d. l. 25.1 m., a. l. 157.2 m., t. l. 65.5 m.	17*	114 00	125 00	22,249 20	24,780 00	July 1, 1873	Part, residue \$195, (71.)	147
1 by 6.6, f. f., a. l. (See remark.)	6	112 00	90 00	5,376 00	4,320 00	July 1, 1873	Trips 6 at weighing; usually 12.	148
by 6, f. f., a. l.	13	111 00	125 00	11,544 00	13,008 00	July 1, 1873	.....	149

F.—Table showing the re-adjustment, under the act of March 3, 1873,

				Length of route.		Average weight of mails whole distance per day	
				Miles.	Pounds.	Miles per hour.	
150	Ill....	11900	23032	East Saint Louis, Evansville.	Saint Louis and Southeastern, Consolidated, (late Saint Louis and Southeastern.)	144.75	1,211 2
151	N. J...	2110	.....	Philadelphia, Bridge-ton.	West Jersey .....	32.40	1,206 5
152	Pa....	2404	.....	Philadelphia, Bethle-hem.	North Pennsylvania.....	54.60	1,196 3
153	R. I...	801	801	Providence, Worcester.	Providence and Worcester ....	44	1,044 3
154	Me....	.....	221	Salmon Falls, Port-land.	Boston and Maine .....	44.18	1,017 3
155	Conn.	945	910	South Norwalk, Dan-bury.	Danbury and Norwalk .....	23.50	1,007 2
156	Ky...	2606	20002	Covington, Lexington	Kentucky Central.....	99	984 2
157	Ky...	26122	20010	Evansville, Guthrie..	Saint Louis and Southeastern, Consolidated, (late Saint Louis and Southeastern.)	110.00	1,194 2
157a	Mass.	607	607	Boston, Southbridge	Boston, Hartford and Erie.....	70	980 2
157b	Iowa	11007	27021	Dubuque, Sioux City	Illinois Central .....	327.12	1,154 2
158	Mass	683	643	Worcester, Nashua ..	Worcester and Nashua .....	42.25	1,142 2
159	Mich	12507	24006	Detroit, Grand Haven	Detroit and Milwaukee .....	190	1,135 2
160	Pa....	2410	.....	Wilkesbarre, Waverly	Lehigh Valley.....	■	1,100 2
161	Mass	606	647	Palmer, Miller's Falls	Central Vermont, (late New London Northern.)	35	1,090 ..
162	Md...	3514	.....	Baltimore, Washing-ton.	Baltimore and Potomac.....	42.00	1,440 2
163	Vt....	523	523	Richford, Newport..	Missisquoi and Clyde Rivers ..	31.38	1,206 3
164	Pa....	2442	.....	Pittsburgh, Oil City	Allegheny Valley .....	132.71	1,029 2
165	Mass	608	608	Boston, Providence ..	Boston and Providence .....	44	1,059 2
166	Md...	3518	.....	Saint Denis, Point of Rocks.	Baltimore and Ohio.....	60	1,045 2
167	Ala...	6604	.....	Montgomery, Calera	South and North Alabama ....	63.00	1,004 2
168	Ind...	12004	22004	Indianapolis, Peru ...	Indianapolis, Peru and Chicago	78	976 2
169	Ohio..	2003	.....	Rochester, Bellaire ..	Cleveland and Pittsburgh .....	62.75	924 2
170	Ind...	12012	22012	Evansville, Terre Haute.	Evansville and Crawfordsville	110	945 2
171	Mass.	677	641	Taunton, Mansfield Junction.	New Bedford, (late Taunton Branch.)	12	906 2
172	N. Y..	1022	1256	Syracuse, Oswego....	Oswego and Syracuse.....	35.50	967 2
173	Wis...	13014	25014	Elroy, Saint Paul ....	West Wisconsin.....	192.40	853 2
174	Me....	204	13	Bath, Rockland .....	Knox and Lincoln .....	50	810 2
175	Ohio..	2012	.....	Xenia, Dayton .....	Pittsburgh, Cincinnati and Saint Louis.	17	824 2
176	Ky...	2607	20003	La Grange, Lexington	Louisville, Cincinnati and Lexington.	67	850 2
177	Cal...	14707	46006	Sacramento, San Francisco.	California Pacific.....	83	839 2
178	Pa....	2417	.....	Scranton, Northum-berland.	Lackawanna and Bloomsburgh	80	857 2
179	Minn.	13504	20009	North McGregor, Minneapolis.	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	215.70	854 2
180	N. Y..	1006	1233	New York, Greenport	Long Island.....	100.50	838 2
181	Me....	1	1	Fairfield, Skowhegan	Maine Central, (late Portland and Kennebec.)	■	941 2
182	Ohio..	2022	.....	Bluff City, Naples ..	Toledo, Wabash and Western ..	■	827 2
183	Ohio..	2038	.....	Salamanca, Dayton...	Atlantic and Great Western ..	380.35	827 2
184	Kans.	14001	33001	Leavenworth, Lawrence.	Kansas Pacific .....	33	827 2
185	N. H..	331	261	Groveton Junction, Wells River.	Boston, Concord and Montreal	53.10	811 2
186	Va....	4406	.....	Richmond, Hinton ..	Chesapeake and Ohio .....	272.50	810 2
187	Mass.	678	642	Taunton, New Bed-ford.	New Bedford, (late New Bedford and Taunton.)	29.30	801 ..



of the rates of pay per mile on certain railroad routes, &amp;c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.					
Feet and inches.		Dolla.	Dolla.	Dolla.	Dolla.				
12 by 6.6, f. f., a. l.	12	110 00	105 00	13,132 50	17,298 75	July	1, 1873	.....	150
10.10 by 6.5, 10.8 by 6.5, f. f., a. l.	12	110 00	100 00	4,824 00	4,440 00	July	1, 1873	\$600 mail-messenger service.	151
20.6 by 6.6, f. f., a. l.	454*	110 00	100 00	6,006 00	5,460 00	July	1, 1873	Part; residue \$50, (373.)	152
14.10 by 6.1, 13.6 by 6.2, f. f., d. l.	18	110 00	75 00	6,340 00	4,900 00	July	1, 1873	\$1,500 side service ..	153
13 by 6.10, f. f., d. l.	19	110 00	.....	.....	.....	July	1, 1873	New; ordered July, 1874.	154
10 by 6, f. f., d. l. ...	244*	110 00	85 12	2,585 00	2,000 00	July	1, 1873	Main route; branch \$50, (425.)	155
12 by 8, f. f., d. l. ...	19	109 00	100 00	10,791 00	9,900 00	July	1, 1873	Part; residue \$75, (225.)	156
12 by 6.6, f. f., a. l. (See remark.)	6	108 00	75 00	11,951 28	8,299 50	July	1, 1873	Trips 6 at weighing; usually 12.	157
12.10 by 6.10, 12.7 by 6.10, f. f., d. l.	12	108 00	90 00	7,560 00	6,300 00	July	1, 1873	.....	157a
12.12 by 9.2, f. f., a. l.	12	107 00	100 00	35,001 84	32,712 00	July	1, 1873	.....	157b
12.4 by 6.6, f. f., a. l.	12	107 00	100 00	4,948 75	4,625 00	July	1, 1873	.....	158
12 by 9, fixtures, a. l.	15*	105 00	100 00	19,950 00	19,000 00	July	1, 1873	.....	159
22 by 8.6, f. f., a. l.	6	105 00	100 00	11,025 00	10,500 00	July	1, 1873	Part; residue \$120, (139,) \$115, (145.)	160
11.5 by 5.8, f. f., a. l.	6	100 00	75 00	3,500 00	2,625 00	July	1, 1873	.....	161
14.6 by 8.6, f. f., a. l.	6	100 00	.....	.....	.....	July	1, 1872	New; ordered April, 1874.	162
13.5 by 7.4, f. f., a. l.	6	100 00	50 00	3,138 00	1,569 00	July	1, 1873	.....	163
14.8 by 8.8, f. f., a. l.	18	100 00	85 00	13,271 00	11,280 35	July	1, 1873	.....	164
No apt., no r. a. ...	201*	100 00	200 00	4,400 00	8,800 00	July	1, 1873	.....	165
7 by 8.7, f. f., a. l.	6	100 00	50 00	6,000 00	3,000 00	July	1, 1873	.....	166
3.7 by 7.5, fixtures, a. l.	7	100 00	50 00	6,380 00	3,190 00	May	17, 1873	Part; residue \$75, (247.)	167
2 by 8, f. f., a. l. ...	18	100 00	150 00	8,400 00	10,500 00	July	1, 1874	\$600 m. m.; 24 miles formerly at \$75.	168
3 by 9, f. f., a. l. ...	18	100 00	125 00	6,675 00	8,503 75	July	1, 1873	.....	169
2.3 by 7.6, f. f., a. l.	12	100 00	85 00	11,000 00	9,330 00	April	1, 1873	Part; residue \$50..	170
No apt.; no r. a. ...	363*	100 00	150 00	1,500 00	1,800 00	July	1, 1873	\$300 mail-messenger service.	171
1 by 6, fixtures, d. l.	18	100 00	75 00	3,550 00	2,662 50	July	1, 1873	.....	172
0 by 8, f. f., a. l.	12	100 00	50 00	19,840 00	9,920 00	July	1, 1873	Main route, branch \$30, (464.)	173
4.6 by 7.2, 13 by 6.2, f. f., d. l.	12	100 00	85 00	5,000 00	4,250 00	July	1, 1873	One mile increase. ...	174
5.6 by 8.6, f. f., a. l.	24	94 00	85 00	1,598 00	1,445 00	July	1, 1873	.....	175
0 by 7.3, f. f., a. l.	12	92 00	100 00	6,164 00	6,730 00	July	1, 1873	.....	176
0 by 8.10, f. f., a. l.	7	91 00	150 00	7,553 00	12,450 00	July	1, 1873	Main route, branch \$50, (416.)	177
0 by 6.8, f. f., a. l.	7 1/2*	90 00	75 00	7,200 00	6,000 00	July	1, 1873	.....	178
0 by 10.3, f. f., a. l.	6 1/2*	90 00	150 00	19,413 00	32,335 00	July	1, 1873	.....	179
0 by 8, 10.4 by 8.3, f. f., a. l.	9*	90 00	100 00	11,045 00	12,050 00	July	1, 1873	\$2,000 m. m. service at New York.	180
0 by —, a. l. ....	6	90 00	75 00	1,530 00	1,275 00	July	1, 1873	Part; residue \$140, (118.)	181
0 by —, f. f., a. l. ...	12	90 00	53 00	360 00	220 00	July	1, 1873	Branch, main route \$273, (21,) \$255, (22,)	182
6 by —, f. f., a. l.	16	90 00	80 00	35,050 50	33,994 00	July	1, 1873	61 miles formerly at \$110.	183
3 by 10.6, f. f., a. l.	12	90 00	85 00	2,970 00	2,805 00	July	1, 1873	Branch, main route \$190, (73.)	184
0 by 6.8, f. f., a. l.	10 1/2*	90 00	50 00	4,770 00	2,655 00	July	1, 1873	.....	185
7 by 8.10, f. f., a. l.	12	90 00	100 00	24,532 20	27,258 00	July	1, 1873	.....	186
0 r. a. Locked room in b. c.	27*	90 00	85 00	2,437 50	2,335 00	July	1, 1873	\$612.50 mail-messenger service.	187

F.—Table showing the re-adjustment, under the act of March 3, 1873

				Terminal.	Corporate title of company carrying the mail.	Length of route.	Average weight of mail in all-letters per day.	Miles per hour.
						Miles.	Pounds.	
11				Milwaukee, Berlin ...	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	94.80	790	8
11				Bureau Junction, Peoria.	Chicago, Rock Island and Pacific.	47	735	2
190	Mass.	628	644	Sterling Junction, Fitchburgh.	Boston, Clinton and Fitchburgh.	14	691	2
191	Mass.	640	631	South Framingham, Pratt's Junction.	.....do.....	29	667	2
192	Tenn.	10006	19006	Nashville, Decatur ...	Nashville and Decatur .....	1224	766	2
193	Mass.	745	680	Worcester, Gardner ...	Boston, Barre and Gardner ...	27	757	2
194	Ohio...	9040	.....	Columbus, Athens ...	Columbus and Hocking Valley	77.40	735	2
195	Ill....	11063	23025	Hannibal, Naples ....	Toledo, Wabash and Western ..	45.50	733	2
196	Conn.	943	909	Bridgeport, Pittsfield	Housatonic .....	110	734	2
197	Mich...	12581	24021	New Buffalo, Pent Water.	Chicago and Michigan Lake Shore.	165.50	727	1
198	Vt.....	508	408	Saint Albans, Canada Line.	Central Vermont, (late Vermont and Canada.)	17	613	2
199	Nebr...	14423	34005	Nebraska City, Seward.	Midland Pacific .....	94.10	732	1
200	Mich...	12950	34031	Fort Howard, Escanawba.	Chicago and Northwestern ....	114.00	731	2
201	Mich...	12346	34039	Escanawba, Negaunee	.....do .....	62.22	710	2
202	Conn.	925	901	Norwich, Worcester ..	Boston, Hartford and Erie .....	60	710	2
203	Iowa...	11011	27029	Missouri Valley, Sioux City.	Sioux City and Pacific .....	76	704	2
204	Pa....	2404	.....	Pittsburgh, Cumberland.	Pittsburgh and Connellsville ..	147.60	690	2
205	Pa....	2419	.....	Binghamton, New Hampton.	Delaware, Lackawanna and Western.	144.50	685	2
206	Pa....	2416	.....	Hasle Creek Bridge, Hazleton, Lumber-Yard, Ebervale.	Lehigh Valley .....	12.60	517	2
207	Iowa...	11001	27019	Keokuk, Des Moines	Keokuk and Des Moines .....	162	694	2
208	Mich...	12508	24007	Detroit, Port Huron ..	Grand Trunk .....	64.50	692	2
209	Wis...	13396	25016	Milwaukee, Menasha.	Wisconsin Central, operated by Phillips & Colby Construction Company.	100	687	2
210	N. J. {	1451a	2254	{ New York, Middle-town.	New Jersey Midland .....	98	650	2
211	N. Y. {	2132	1212	{ Troy, Schenectady ..	New York Central and Hudson River.	92	641	2
212	Pa....	2408	.....	Chester, Port Deposit	Philadelphia and Baltimore Central.	59.25	639	2
213	Utah...	16633	41001	Salt Lake City, Ogden	Utah Central .....	36.50	630	1
214	N. Y. ...	1032	1905	Rochester, Avon .....	Erie .....	18	646	2
215	N. Y. ...	1228	1229	Utica, Norwich .....	Delaware, Lackawanna and Western.	54.50	637	2
216	Cal. ...	14876	46010	Lathrop, Goehen .....	Central Pacific .....	144.91	632	2
217	Mo....	10502	29002	Bismarck, Argenta ..	Saint Louis and Iron Mountain and Cairo and Fulton.	202	627	1
218	N. J. ...	2116	.....	Trenton, Intersection with Delaware, Lackawanna and Western Railroad.	Pennsylvania .....	68.70	617	2
219	Cal. ...	14702	46009	San Francisco, Salina	Southern Pacific .....	118	611	2
220	Conn...	955	911	Waterbury, Providence.	Hartford, Providence and Fishkill.	122.50	612	2
221	Ill....	11429	23005	Sterling, Alton Junction.	Rockford, Rock Island and Saint Louis.	270.80	604	2
222	N. Y. ...	1040	1230	Owego, Ithaca .....	Delaware, Lackawanna and Western.	35	601	2
223	S. C. ...	5605	.....	Branchville, Charleston.	South Carolina .....	69	621	2
224	Tenn.	10007	19007	Nashville, Hickman ..	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	170.62	577	2

of the rates of pay per mile on certain railroad routes, &amp;c.—Continued.

				Amount of annual pay.					
Feet and inches.		Dolls.	Dolls.	Dolls.					
22.6 by 10.3, f.f., a. l.	12	90 00	75 00	8,532 00	7,110 00	July 1, 1873			188
14 by 10, f.f., a. l.	12	90 00	75 00	4,220 00	3,525 00	July 1, 1873			189
12 by 8.6, f.f., d. l.	12	90 00	75 00	1,280 00	1,050 00	July 1, 1873			190
9 miles.									
12 by 8.6, f.f., d. l.	18	90 00	75 00	2,610 00	2,175 00	July 1, 1873			191
5 by 7.8, f.f., a. l.	12	90 00	75 00	10,765 33	9,175 00	July 1, 1873			192
10 by —, fixtures, d. l.	12	87 50	50 00	2,362 50	1,350 00	July 1, 1873			193
14 by 10, f.f., a. l.	12	87 50	75 00	6,772 50	5,805 00	July 1, 1873	Main route; branch \$40.		194
12 by —, f.f., a. l.	6	87 50				July 1, 1873	New; ordered April, 1874. Main route; branch \$50, (393.)		195
11.6 by 6, f.f., a. l.	13½	86 00	80 00	9,770 00	8,800 00	July 1, 1873	31 miles at \$98. Main route; branches \$50, (401.) \$30, (463.)		196
79 miles, d. l. 31 m.									
12.8 by 7, fixtures, a. l.	14½	85 00	100 00	14,233 00	9,275 00	July 1, 1873	Main route; branch \$50.		197
17 by 9.3, f.f., a. l.	6	85 00	100 00	1,445 00	1,700 00	July 1, 1873			198
12 by 7, f.f., a. l.	6	85 00	100 00	7,148 50	4,205 00	July 1, 1873			199
18 by 10, f.f., a. l.	6	85 00				Dec. 1, 1872	New; ordered January, 1874.		200
8 by 10, f.f., a. l.	6	85 00	75 00	5,282 70	4,666 50	July 1, 1873			201
12 by 7, f.f., a. l.	15*	85 00	75 00	5,046 00	5,046 00	July 1, 1873	\$546 mail-messenger		202
20 by —, f.f., a. l.	6	85 00	75 00	6,460 00	5,700 00	July 1, 1873	Part; residue \$50		203
4.6 by 8.6, f.f., m. c., a. l.	12	85 00		12,563 00	7,390 00	July 1, 1873	Main route; branch \$54, (347.)		204
9 by 7, f.f., a. l.	9½	85 00	80 00	12,299 50	11,560 00	July 1, 1873			205
0 by 7, f.f., d. l.	13	85 00	75 00	1,173 00	1,035 00	July 1, 1873			206
6.6 by 9, f.f., a. l.	12	84 00	75 00	13,608 00	12,150 00	Apr. 1, 1874			207
2 by 7.2, f.f., c., a. l.	12	83 00	100 00	5,353 50	6,425 00	July 1, 1873	½ mile increase.		208
4.2 by 7.10, f.f., a. l.	6	83 00	100 00	8,300 00	5,000 00	July 1, 1873			209
6 by 7, f.f., a. l.	6	83 00	50 00	7,304 00	4,400 00	Jan. 1, 1874	{ Consolidation; or- } { dered July, 1874 }		210
a. c. . . . .	18	82 00	75 00	1,804 00	1,650 00	July 1, 1873			211
car, d. l. . . . .	12	82 00	75 00	4,858 50	4,443 75	July 1, 1873			212
to r. a. . . . .	14	80 00		2,920 00	1,925 00	July 1, 1873			213
a. c.; no r. a. . . . .	12	80 00	75 00	1,440 00	1,350 00	July 1, 1873			214
9.3 by 6.7, f.f., a. l.	12	80 00	100 00	4,360 00	2,425 00	July 1, 1873	6 miles increase . . .		215
4.7 by 6.10, f.f., a. l.	6	80 00	50 00	11,592 80	7,245 50	July 1, 1873			216
0.4 by 6.10, a. l.	6	80 00	50 00	20,960 00	13,100 00	July 1, 1873	Branch; main route \$100.		217
6 by 6, f.f., a. l.	20½*	80 00	75 00	5,496 00	5,152 50	July 1, 1873			218
1 by 9, 11.6 by 9, f.f., a. l.	7	80 00	100 00	9,440 00	11,800 00	July 1, 1873	Main route; branch \$50, (422.)		219
4.2 by 6.6, f.f., a. l.	22½*	80 00	100 00	2,800 00	12,250 00	July 1, 1873			220
0.11 by 9.4, f.f., a. l.	10½*	80 00	90 00	21,664 00	24,372 00	July 1, 1874			221
by 7.8, f.f., a. l.	12	80 00	85 71	2,800 00	3,000 00	July 1, 1873			222
6.2 by 8.2, f.f., d. l.	13	80 00	75 00	4,960 00	4,650 00	July 1, 1873	Branch; main route \$70, (329.)		223
2 by 9, f.f., a. l.	13½*	80 00	75 00	13,323 96	12,750 00	July 1, 1873	0.69 mile increase . . .		224

F.—Table showing the re-adjustment, under the act of March 3, 1873,

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	Pounds.	
225	Minn	13505	26004	Saint Paul, Sioux City	Saint Paul and Sioux City .....	245	545	20
226	Ky....	9606	20002	Lexington, Nicholasville.	Kentucky Central .....	13	984	25
227	N. Y..	1030	1214	Canandaigua, Niagara Falls.	New York Central and Hudson River.	97	711	20
228	Nebr..	14479	34004	Omaha, Concord .....	Burlington and Missouri River in Nebraska.	21. 50	690	20
229	Iowa..	11012	27001	Burlington, Plymouth	Burlington, Cedar Rapids and Minnesota.	228	663	20
230	Mich..	12511	24010	Jackson, Grand Rapids.	Michigan Central .....	94. 50	568	25
231	Mich..	12505	24004	White Pigeon, Kalamazoo.	Lake Shore and Michigan Southern.	38. 33	572	18
232	Wis..	13013	25010	Caledonia, Elroy .....	Chicago and Northwestern....	135. 45	562	24
233	Kans..	14143	33007	Atchison, Sargent....	Atchison, Topeka and Santa Fé	470. 25	562	20
234	Vt....	520	409	Saint Albans, Richford.	Central Vermont, (late Vermont and Canada.)	28. 66	556	16. 5
235	Colo ..	17051	38003	Hughes Station, Erie.	Denver and Boulder Valley....	15	550	15
236	Minn..	13508	26006	Saint Paul, Du Luth..	Lake Superior and Mississippi	156	543	20
237	N. Y..	1036	1215	Buffalo, Lockport .....	New York Central and Hudson River.	22	542	20
238	Mo....	10505	28005	Palmyra, Hannibal...	Hannibal and Saint Joseph....	15	532	22
239	Ind ...	12009	22009	Richmond, Chicago ..	Pittsburgh, Cincinnati and Saint Louis.	225. 50	529	20
240	Ill ....	11432	23011	Burlington, Quincy...	Chicago, Burlington and Quincy	71. 85	526	21. 5
241	Ill ....	14414	23033	Peoria, Jacksonville..	Peoria, Pekin and Jacksonville.	87. 40	525	21
242	Pa ....	2412	.....	Penn Haven Junction, Audenreid.	Lehigh Valley .....	17. 50	521	20
243	Mo ...	10507	28007	Moberly, Ottumwa ..	Saint Louis, Kansas City and Northern, (late North Missouri.)	131	515	22
244	Cal ...	14945	46013	Goshen, Tipton .....	Southern Pacific .....	21	507	20
245	N. C ..	5004	.....	Greensborough, Goldsborough.	Richmond and Danville .....	130	502	15
246	Ind ...	12013	22013	State Line, Logansport.	Pittsburgh, Cincinnati and Saint Louis.	61	498	22
247	Ala ...	6604	.....	Calera, Decatur .....	South and North Alabama .....	112. 05	492	20
248	Nebr..	14451	34002	Plattsmouth, Kearney Junction.	Burlington and Missouri River, in Nebraska.	191	483	20
249	Ga....	6017	.....	Atlanta, Charlotte...	Atlanta and Richmond Air-Line	259. 10	475	22
250	Ill ....	11917	23037	Vincennes, Cairo .....	Cairo and Vincennes .....	156. 4	467	22
251	Wis ..	13018	25017	Menasha, Stevens Point.	Wisconsin Central, operated by Phillips & Colby Construction Company.	65. 27	451	20
252	Wis ..	13003	25013	Racine, Rock Island Junction.	Western Union .....	182. 40	450	20
253	Colo ..	17064	38001	Denver, Pueblo .....	Denver and Rio Grande .....	119	433	17
254	Ga....	6015	.....	Fort Valley, Euftaula.	Southwestern .....	115. 4	422	20
255	Kans ..	14143	33007	Newton, Wichita .....	Atchison, Topeka and Santa Fé.	96	422	15
256	Mich ..	12512	24011	Kalamazoo, Grand Rapids.	Lake Shore and Michigan Southern.	58. 4	423	21
257	Pa ....	2427	.....	Lancaster, Middletown.	Pennsylvania .....	31. 20	404	20
258	S. C ...	5605	.....	Kingsville, Columbia.	South Carolina .....	27	290	15
259	S. C ...	5605	.....	Kingsville, Augusta ..	..... do. ....	119	274	15
260	Mich ..	12522a	24013	Detroit, Bay City....	Detroit and Bay City .....	111. 13	422	20
261	Minn ..	13507	26002	Saint Paul, Sauk Rapids.	Saint Paul and Pacific .....	78	414	15

of the rates of pay per mile on certain railroad routes, &amp;c.—Continued.

Feet and inches.		Amount of annual pay.		Former amount of annual pay.					
		Dolls.	Dolls.	Dolls.	Dolls.				
28.3 by 9.3, 22.4 by 9.3, f. f., a. l.	84*	77 25	50 00	16,926 25	14,419 75	July 1, 1873	362 miles formerly at \$75.		225
12 by 8, f. f., a. l.	6	75 00	50 00	975 00	650 00	July 1, 1874	Part; residue \$109, (156.)		226
14.6 by 8.6, 11 by 9, f. f., a. l., (old report.)	6	75 00	50 00	7,975 00	4,850 00	July 1, 1873			227
18.8 by 7, f. f., a. l.	6	75 00	80 00	1,925 50	1,336 00	July 1, 1873	1 mile increase; \$313 forriage.		228
12 by 9.2, f. f., a. l.	84*	75 00	55 00	17,100 00	12,540 00	July 1, 1873			229
14 by 10, f. f., a. l.	6	75 00	50 00	7,087 50	4,725 00	July 1, 1873			230
17.3 by 9, f. f., a. l.	12	75 00	50 00	2,874 75	1,916 50	July 1, 1873			231
42.6 by 10, f. f., a. l.	6	75 00	100 00	10,158 75	13,545 00	July 1, 1873			232
14 by 9, 10 by 7, 11 by 7, f. f., a. l.	6	75 00	100 00	25,968 75	41,075 00	July 1, 1873	Main route; branch \$70, (255;) 119 miles formerly at \$50.		233
9.6 by 7.2, f. f., a. l.	6	75 00	50 00	2,149 00	1,433 00	July 1, 1873			234
— by —, f. f., a. l.	6	75 00	50 00	1,125 00	750 00	July 1, 1873	Weight reported to Boulder City, 27 miles.		235
30 by 10, f. f., a. l.	72*	75 00	50 00	11,700 00	7,600 00	July 1, 1873			236
b. c.	12	75 00	50 00	1,650 00	1,100 00	July 1, 1873			237
b. c.; no r. a.	19	75 00	175 00	1,125 00	2,625 00	July 1, 1873	Branch; main route \$237.50, (36.)		238
12 by 8.6, f. f., a. l.	6	75 00	150 00	16,912 50	33,825 00	July 1, 1873			239
10 by 7, f. f., a. l.	6	75 00	50 00	5,388 75	3,592 50	July 1, 1873			240
13 by 8, f. f., a. l. (See remark.)	64*	75 00	55 00	8,555 00	4,607 00	Apr. 1, 1874	In March, 1874. Additional trips for portion of the year		241
10 by 7, f. f., a. l. 8 miles.	12	75 00	60 00	1,312 50	1,850 00	July 1, 1873			242
24 by 7.6, f. f., a. l.	12	75 00	50 00			July 1, 1873	New; ordered April, 1874.		243
14.7 by 8.10, f. f., a. l.	7	75 00	50 00	1,575 00	1,050 00	July 1, 1873			244
21 by 8, f. f., a. l.	7	75 00	82 11	9,750 00	10,675 00	July 1, 1873	Part; residue \$126, (126.)		245
24 by 8, f. f., a. l.	6	75 00	50 00	4,575 00	3,030 00	July 1, 1873			246
12.7 by 7.5, fixtures, a. l.	7	75 00	50 00	8,928 75	5,959 50	May 17, 1873	Part; residue \$100, (167.)		247
18.6 by 7, f. f., a. l.	6	70 00	50 00	12,370 00	9,550 00	July 1, 1873			248
42.6 by 10, f. f., a. l.	7	70 00	50 00			July 1, 1873	New; ordered May, 1874.		249
10 by 6, f. f., a. l.	6	70 00	50 00			July 1, 1873	New; ordered April, 1874.		250
14.2 by 7.10, f. f., a. l.	6	70 00	60 00	4,568 90	3,916 90	July 1, 1874			251
23 by 10, f. f., a. l.	6	70 00	50 00	12,958 00	8,470 00	July 1, 1873			252
9.5 by 5.10, f. f., a. l.	7	70 00	50 00	8,330 00	5,950 00	July 1, 1873			253
14 by 8.9, f. f., a. l.	13	70 00	75 00	8,098 66	6,675 00	July 1, 1873			254
14 by 9, 10 by 7, 11 by 7, f. f., a. l.	6	70 00	100 00	1,890 00	2,600 00	July 1, 1873	Branch; main route \$75, (223.)		255
17.3 by 9, f. f., a. l.	12	70 00	60 00	4,121 25	3,539 50	July 1, 1873			256
10.10 by 8, f. f., a. l.	15*	70 00	75 00	2,184 00	2,340 00	July 1, 1873			257
16.2 by 8.2, f. f., a. l.	13	70 00	60 00	1,690 00	1,690 00	July 1, 1873	Branch; main route \$70, (223.)		258
16.2 by 8.2, f. f., a. l.	13	70 00	125 00	8,330 00	14,675 00	July 1, 1873	Main route; branches \$80, (223.) \$70, (228.)		259
14 by 7.6, f. f., a. l.	12	68 00	50 00			Sept. 20, 1873	New; ordered April, 1874.		260
12.6 by 9, f. f., a. l.	114*	68 00	75 00	5,304 00	5,850 00	July 1, 1874			261

F.—Table showing the re-adjustment, under the act of March 3, 1873

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	Pounds.	
262	Wis ..	13020	25018	Milwaukee, Two Rivers.	Milwaukee, Lake Shore and Western.	85	411	20
263	Pa ....	2425	.....	Irvine, Corry .....	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	95	407	20
264	Mass ..	619	618	Salem, Gloucester....	Eastern .....	16	402	20
265	Va ....	4413	.....	Petersburgh, Lynchburgh.	Atlantic, Mississippi and Ohio	123	433	23
266	Del ...	3402	.....	Delmar, Crisfield....	Eastern Shore .....	38	412	20
267	N. Y ..	1042	1225	Oswego, Richland....	Rome, Watertown and Ogdensburgh.	28.50	365	.....
268	N. H ..	278	257	Nashua, Wilton.....	Boston and Lowell and Nashua and Lowell.	16	363	25
269	W. Va ..	4293	.....	Huntington, Hinton.	Chesapeake and Ohio.....	150.42	363	28
270	Pa ....	2440	.....	Blairsville, Allegheny	Pennsylvania.....	63.70	378	17
271	N. Y ..	1010	1204	Newburgh, Chester ..	Erie .....	19.75	377	20
272	Mich ..	12517	24017	Detroit, Howard .....	Detroit, Lansing and Lake Michigan.	164.67	375	20
273	N. Y ..	1574	1203	Buffalo, Suspension Bridge.	Erie.....	25.94	369	20
274	N. Y ..	{1025} {1181}	1283	Utica, Watertown ...	Utica and Black River.....	92.22	368	25
275	Pa ....	2436	.....	Tyrone, Clearfield ...	Pennsylvania .....	40.60	366	15
276	Me ...	117	7	Portland, Rochester..	Portland and Rochester .....	52	361	20
277	Pa ....	2456	.....	Pittsburgh, Washington.	Pittsburgh, Cincinnati and Saint Louis.	22.80	351	15
278	N. Y ..	1566	1269	Ithaca, Cortland Village.	Utica, Ithaca and Elmira .....	23	266	20
279	Ill ....	11411	23027	State Line, Warsaw ..	Toledo, Peoria and Warsaw ...	228.75	369	24
280	Iowa ..	11010	27022	Waterloo, Mona .....	Illinois Central.....	80	362	15
281	Minn ..	13838	26005	Du Luth, Moorhead..	Northern Pacific .....	229	361	20
282	Ohio ..	9035	.....	Valley Junction, Hagerstown.	Whitewater Valley .....	70.45	372	19
283	N. Y ..	1582	1263	Fort Henry, Ticonderoga.	New York and Canada, (late Vermont Central and Vermont and Canada.)	17	370	24
284	N. Y ..	1024	1226	Watertown, Cape Vincent.	Rome, Watertown and Ogdensburgh.	26	364	20
285	N. Y ..	1026	1227	De Kalb Junction, Pottsdam Junction.	.....do.....	25	363	20
286	Pa ....	2439	.....	Tyrone, Lock Haven.	Pennsylvania.....	55.10	356	20
287	Mass ..	637	628	Ayer, Mason Village.	Fitchburgh.....	23	350	25
288	Mass ..	703	649	South Vernon Junction, Keene.	Cheshire and Ashuelot .....	24	349	24
289	Cal ...	14705	46005	Sacramento, Folsom City.	Sacramento Valley .....	23.20	349	20
290	Pa ....	2444	.....	Meadville, Oil City ..	Atlantic and Great Western ..	36.25	347	25
291	Ohio ..	9022	.....	Clayton, Keokuk.....	Toledo, Wabash and Western	44	346	22
292	Mass ..	742	659	South Framingham, Lowell.	Boston, Clinton and Fitchburgh.	29	227	25
293	.....	.....	.....	.....	.....	.....	.....	.....
294	Iowa ..	11016	27012	Clinton, La Crescent Junction.	Chicago, Dubuque and Minnesota.	178.57	365	20
295	Va ....	4412	.....	Petersburgh, Norfolk	Atlantic, Mississippi and Ohio.	81.50	360	24
296	Pa ....	2443	.....	Branch Junction, Indiana.	Pennsylvania.....	19	359	15
297	Ill ....	11409	23008	Elmwood, Buda.....	Chicago, Burlington and Quincy	45	356	14
298	N. H ..	309	260	Brock's Crossing, Conway.	Portsmouth, Great Falls and Conway.	64.83	344	20
299	Ill ....	11901	23012	Streator, Aurora, Batavia.	Chicago, Burlington and Quincy	62.79	344	24
300	Pa ....	2409	.....	Honedale, Lackawaxen.	Erie.....	25	343	20
301	N. Y ..	1033	1206	Avon, Dansville .....	.....do.....	30.73	340	20



of the rates of pay per mile on certain railroad routes, &amp;c.—Continued.

Feet and inches. 12 by —, f. f., a. l.	12	Dolla.	Dolla.	Dolla.	Dolla.	annual pay.		
12 by —, f. f., a. l.	12	67 00				Oct. 30, 1873	New; ordered June, 1874. Main route; branch \$40. (440.)	262
6 by 7, f. f., a. l.	12	67 00	85 00	6,365 00	6,569 00	July 1, 1873	50.2 miles formerly at \$55.	263
No r. a.	16	67 00	50 00	1,673 00	1,673 00	July 1, 1873		264
21 by 9, f. f., a. l.	6	65 00	50 00	7,985 00	6,150 00	July 1, 1873		265
29 by 9.4, f. f., a. l.	6	65 00	50 00	2,470 00	2,375 00	July 1, 1873		266
No r. a.	15*	65 00	50 00	1,852 50	1,645 00	July 1, 1873		267
36 cubic feet; no r. a.	13	65 00	56 25	1,040 00	900 00	July 1, 1873		268
20.7 by 6.10, f. f., a. l.	6	65 00	50 00	9,777 30	7,521 00	July 1, 1873		269
10.9 by 8, f. f., a. l.	21*	65 00	60 00	4,140 50	3,692 00	July 1, 1873		270
b. c., no r. a.	12	65 00	50 00	1,283 75	967 50	July 1, 1873	Main route; branch \$50.	271
10 by 9, f. f., a. l.	6	65 00	75 00	10,703 55	12,300 00	July 1, 1873	0.67 mile increase	272
b. c., no r. a.	13	65 00	50 00	1,686 10	1,297 00	July 1, 1873		273
13 by 9, f. f., a. l.	12	65 00	64 64	5,994 50	5,961 84	July 1, 1873		274
10.9 by 8, f. f., a. l.	12	65 00	60 00	2,639 00	2,436 00	July 1, 1873		275
13 by 8, 12 by 7, d. l.	12	65 00	55 55	3,380 00	2,688 60	July 1, 1873		276
6.6 by 6.11, f. f., d. l.	12	65 00	60 00	1,482 00	1,368 00	July 1, 1873		277
10.6 by 6.11, f. f., d. l.	12	65 00	50 00	1,495 00	1,156 00	July 1, 1873	1 mile increase	278
23 by 6.9, f. f. c., a. l.	6	64 00	60 00	15,249 00	14,980 00	July 1, 1873	112 miles formerly at \$65; \$600 ferriage; branch \$50. (413.)	279
19.1 by 9.2, f. f., a. l.	12	63 00	50 00	5,040 00	4,000 00	July 1, 1873		280
13 by 7, f. f., a. l.	6	63 00	50 00	14,427 00	11,450 00	July 1, 1873		281
12 by 7.4, f. f., a. l.	6	62 50	55 00	4,403 12	3,874 75	July 1, 1873		282
14 by 6.8, f. f., a. l.	6	62 50	50 00	1,062 50	850 00	July 1, 1873		283
No r. a.	12	62 50	50 00	1,625 00	1,300 00	July 1, 1873		284
No r. a.	6	62 50	115 00	1,562 50	2,875 00	July 1, 1873	Branch; main route \$138. (120.)	285
10.9 by 8, f. f., a. l.	12	62 50	60 00	3,443 75	3,306 00	July 1, 1873		286
6 by 6, f. f., a. l.	12	62 50	50 00	1,437 50	1,150 00	July 1, 1873		287
13.6 by 7.1, d. l., no r. a.	12	62 50	50 00	1,500 00	1,900 00	July 1, 1873		288
6.6 by 5, no r. a.	12	62 50	50 00	1,450 00	1,160 00	July 1, 1873		289
12.6 by 8, f. f., a. l.	9*	62 50	50 00	2,265 00	2,718 75	July 1, 1873		290
12 by —, f. f., a. l.	12	62 00	75 00	2,738 00	3,300 00	July 1, 1873	Branch, main route \$273, (22,) and \$255, (22.)	291
14 by 6.9, f. f., d. l.	12	62 00	50 00	1,798 00	1,450 00	July 1, 1873		292
							Vacant	293
13.6 by 8.10, f. f. c., a. l.	6	60 00	50 00	10,714 20	9,421 35	Apr. 1, 1874		294
21 by 9, f. f., a. l.	6	60 00	50 00	4,690 00	4,075 00	July 1, 1873		295
b. c.; no r. a.	12	60 00	55 00	1,140 00	1,045 00	July 1, 1873		296
22 by 8.6, f. f., a. l.	6	60 00	50 00	2,700 00	2,225 00	July 1, 1873	Half mile increase. Branch; main route \$80. (305.)	297
3 by 6, f. f., a. l.	7*	60 00	50 00	3,899 60	3,241 50	July 1, 1873		298
14 by 7, f. f., a. l.	6	60 00	50 00	4,187 40	3,489 50	July 1, 1873		299
b. c., no r. a.	12	60 00	75 00	1,600 00	1,675 00	July 1, 1873		300
b. c.; no r. a.	12	60 00	50 37	1,843 60	1,624 00	July 1, 1873		301

F.—Table showing the re-adjustment, under the act of March 3, 1873.

							Average weight of malle while dis- tance per day	Miles per hour.
						Pounds.		
383	Iowa	11018	27007	Creston, Hopkins .....	Burlington and Missouri River	44.40	337	15
394	Ohio	9047	.....	Mansfield, Toledo.....	Pennsylvania Company .....	80.10	336	26
395	Iowa	11003	37005	Red Oak, Eastport....	Burlington and Missouri River	50	331	26
396	R. I . .	821	804	Warren, Fall River ..	Fall River, Warren and Provi-	7	331	15
397	Conn	607	975	Putnam, Willimantic..	dence. Boston, Hartford and Erie.....	94.08	329	25
398	Ky ..	9843	90016	Maysville, Paris . ...	Maysville and Lexington .....	50	328	26
399	Mass	658	536	Braintree Junction, Cohasset Junction	South Shore .....	12	327	26
400	Ind ...	12019	29019	Fort Wayne, Conners- ville,	Fort Wayne, Muncie and Cin-	100	326	26
401	Kans	14004	33004	Elwood, Hastings ...	cinnati. Saint Joseph and Denver City	227.20	325	26
402	Kans	14006	33006	Junction City, Parsons	Missouri, Kansas and Texas ..	154.50	324	26
403	Mich	12509	24008	Jackson, Fort Wayne	Fort Wayne, Jackson and Sag-	94.30	323	26
404	Mich	12516	24016	East Saginaw, Reed City.	Inaw. Flint and Père Marquette.....	90.47	322	26
405	Mo ..	10518	28018	Quincy, Keokuk .....	Mississippi Valley and Western	41	321	26
406	Iowa ..	11016	27012	Clinton, La Crescent	Chicago, Dubuque and Minne-	178.57	320	26
407	Pa ...	2413	.....	Pottsville, Herndon ..	sota. Philadelphia and Reading .....	81.10	319	26
408	Ill ...	11414	23038	Peoria, Jacksonville..	Peoria, Pekin and Jacksonville.	87.40	318	26
409	Me ...	188	10	Old Town, Guilford ..	Consolidated European and North American, (late Ban-	48.10	317	26
410	Conn.	977	915	New Haven, Ansonia.	gor and Piscataquis.) New Haven and Derby.....	13.50	316	26
411	Mich.	12955	24034	Walton Junction, Tra- verse City.	Continental Improvement Com-	28.26	315	26
412	Pa ....	2405	.....	Philadelphia, Norristown.	pany. Philadelphia and Reading .....	14.24	314	26

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Feet and inches. — by —, f. f., a. l.		Former pay per mile per annum.		Amount of annual pay.				
		Dolla.	Dolla.	Dolla.	Cents.			
— by —, f. f., a. l.	6	60 00	50 00	3,916 30	3,963 50	Apr. 15, 1873	New; ordered Jan- uary, 1874.	308
14.2 by 7.10, f. f., a. l.	6	60 00	50 00	3,916 30	3,963 50	July 1, 1873		309
12.6 by 8, f. f., a. l.	6	60 00	50 00	3,010 00	1,675 00	July 1, 1873		304
22 by 8.0, f. f., a. l.	6	60 00	50 00	3,625 00	3,187 50	July 1, 1873	Main route; branch \$50, (297.)	305
12 by 7.6, f. f., a. l.	6	60 00	50 00	7,410 00	6,175 50	July 1, 1873		306
12 by 7, f. f., a. l.	6	60 00	50 00	5,530 00	4,600 00	July 1, 1873		307
8 by 6.6, fixtures, a. l.	84*	60 00	103 00	5,530 00	2,570 00	July 1, 1873	Main route; branch \$50, (415.)	308
11 by 7, f. f., a. l.	12	60 00	50 00	2,569 60	2,158 00	July 1, 1873		309
14.2 by 7, f. f., a. l.	9	60 00	50 00	3,690 00	3,075 00	July 1, 1873	Branch; main route \$143, (115.)	310
12 by 5, f. f., a. l.	6	60 00	50 00			Apr. 1, 1874	New; ordered July, 1874.	311
13 by 8, f. f., a. l.	6	60 00	50 00	7,830 00	6,800 00	July 1, 1873	\$500 side-service.	312
10.1 by 6.10, 7.8 by 6.2, f. f., a. l.	7*	60 00	65 00	7,291 90	7,899 45	July 1, 1873		313
No apt	24*	60 00	50 00	1,020 00	900 00	July 1, 1873	\$300 for mail messen- ger service.	314
12 by 6.8, f. f., a. l.	12	60 00	50 00	3,600 00	3,000 00	July 1, 1873		315
No r. a.	184*	60 00	50 00	1,320 00	1,100 00	July 1, 1873		316
9.6 by 6.6, f. f., a. l.	12	60 00	50 00	1,935 00	1,612 50	July 1, 1873		317
No r. a.	12	60 00	55 16	1,926 80	855 00	July 1, 1873	\$1,050 side-service now 0.9 mile decrease.	318
8.4 by 6, f. f., a. l.	6	60 00	50 00			Mar. 1, 1873	New; ordered Octo- ber, 1873.	319
19.3 by 6.7, f. f., a. l.	12	60 00	50 00	1,841 40	1,534 50	July 1, 1873		320
Express car, a. l.	7	60 00	50 00	2,310 00	1,925 00	July 1, 1873	Main route; branch \$50.	321
14 by 7, f. f. c., a. l.	6	60 00	50 00	4,276 90	3,564 00	July 1, 1873		322
13 by 6.6, f. f., a. l.	8	60 00	50 00	2,664 00	2,220 00	July 1, 1873		323
9.6 by 7.6, f. f., a. l.	12	60 00	50 00			July 1, 1873	New; ordered July, 1874.	324
14 by 7, f. f., a. l.	10*	60 00	50 00	3,000 00	2,500 00	July 1, 1873	Branch; main route \$200, (68.)	325
No f. a.	6	60 00	50 00	420 00	350 00	July 1, 1873		326
12.7 by 6.10, 12.10 by 6.10, f. f., d. l.	12	60 00	50 00			Aug. 1, 1873	New; ordered April, 1874.	327
12 by 9, f. f., a. l.	12	59 00	50 00	2,950 00	2,500 00	July 1, 1873		328
b. c., no r. a.	12	58 00	50 00	1,400 00	1,304 00	July 1, 1873	\$704 for mail-messen- ger service.	329
12 by 7.8, f. f., a. l.	6	56 00	50 00	6,322 00	5,450 00	July 1, 1873		330
17 by 7, f. f., a. l.	6	56 00	55 00	13,177 60	12,496 00	July 1, 1874		331
18.0 by 6.8, f. f., a. l.	6	56 00	60 00	2,077 00	2,390 00	July 1, 1873		332
10.6 by 7.6, f. f., a. l.	6	57 00	50 00	5,480 10	4,815 00	July 1, 1873		333
21 by 10.1, f. f., a. l.	7½*	57 00	50 00	5,156 79	4,593 50	July 1, 1873		334
12 by 6.9, f. f., a. l., 12 by 9 additional for thro' mails.	6	57 00	50 00	2,337 00	2,050 00	July 1, 1873		335
16 by 9, 12.2 by 7, f. f. c., a. l.	6	55 00	50 00	2,821 35	2,998 50	July 1, 1873		336
10 by 7, 9 by 6.6 by 4, f. f., a. l.	104*	55 00	50 00	4,460 50	4,055 00	July 1, 1873		337
13 by 8, f. f., a. l.	64*	55 00	50 00	4,807 00	4,370 00	July 1, 1873		338
16 by 7, f. f., a. l.	6	55 00	50 00	2,645 50	2,405 00	July 1, 1873		339
No r. a.	12	55 00	50 00	742 50	675 00	July 1, 1873		340
14 by 7, a. l.	6	55 00	50 00			Oct. 20, 1873	New; ordered Jan- uary, 1874.	341
No r. a.	12	55 00	50 00	691 55	612 00	July 1, 1873		342

F.—Table showing the re-adjustment, under the act of March 3, 1873

				Length of route.		Average weight of mails whole distance per day		Miles per hour.
				Miles.	Pounds.			
			Penn, La Porte.....	Chicago, Cincinnati and Louisville.	73	257	2	
			Streator, Pekin.....	Chicago, Pekin and Southwestern.	63.28	235	9	
			Cassfield Junction, Richfield Springs.	Delaware, Lackawanna and Western.	91	248	11	
			Syracuse, Lacona.....	Syracuse Northern.....	44.92	245	10	
			Connellsville, Uniontown.	Pittsburgh and Connellsville..	12	256	13	
			Lebanon Junction, Fish Point.	Louisville and Nashville.....	109.90	254	10	
			Centralia, Columbia..	Saint Louis, Kansas City and Northern, (late North Missouri.)	29	249	13	
			Chicago, Danville...	Chicago, Danville and Vincennes.	106	240	11.2	
			Sunbury, Tomhicken.	Pennsylvania.....	44.10	247	9	
			Belfast, Burnham...	Maine Central, Belfast division.	34.19	244	9	
			South Braintree Junction, Newport.	Old Colony and Newport.....	61.75	272	5	
			Cohasset Narrows, Wood's Hole.	Cape Cod, operated by Old Colony and Newport.	19	268	5	
			Chattanooga, Meridian.	Alabama and Chattanooga....	290	265	12	
			Raleigh, Sanford....	Raleigh and Augusta Air-Line	45.78	241	9	
			Brocton, Corry.....	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Buffalo, Corry and Pittsburgh.)	45.30	238	9	
			Clayton, Easton.....	Maryland and Delaware.....	44	232	9	
			Viele, Unionville....	Burlington and Southwestern..	104.75	234	9	
			Auburn, Logansport	Detroit, Red River and Illinois	32.80	227	5.2	
			Middletown, Berlin Depot.	New York, New Haven and Hartford.	10	228	9	
			Elyria, Millbury.....	Lake Shore and Michigan Southern.	74.90	39.06	2	
			Road House, Mexico	Chicago and Alton.....	90	1,419	5	
364	Iowa..	11005	97015	Des Moines, Indianola	Chicago, Rock Island and Pacific.	21.40	243	17
365	Minn..	13840	26003	East St. Cloud Junction, Melrose.	Saint Paul and Pacific.....	35	223	14
366	Ind..	12020	22020	Richmond, Ft. Wayne	Cincinnati, Richmond and Fort Wayne.	91.50	213	25
367	Kans.	14235	33010	Leavenworth, Holton.	Kansas Central.....	55.69	209	16
368	N. Y.	1021	1243	Plattsburgh, Canada Line.	Montreal and Plattsburgh.....	23	202	22
369	N. Y..	1045	1209	Goshen, Montgomery.	Erie.....	14.25	204	5
370	N. Y..	1017	1239	Hoosac Junction, State Line.	Troy and Boston.....	5.50	199	25
371	Me....	9	3	Newport, Dexter.....	Maine Central.....	14	196	9
372	Wis...	13009	25006	Horicon, Portage...	Chicago, Milwaukee and Saint Paul, (late Milwaukee and Saint Paul.)	45.25	194	9
373	Pa....	2494	.....	Landsdale, Doylestown.	North Pennsylvania.....	9.80	193	2
374	Ohio..	9006	.....	Leavittsburgh, Sharon	Atlantic and Great Western..	31.41	192	2
375	Ind..	12027	22027	Rockville, Logansport	Logansport, Crawfordville and Southwestern.	92.10	192	9
376	Mass	672	639	New Bedford, West Wareham.	New Bedford, (late New Bedford and Taunton.)	11.25	190	5
377	Iowa	11006	27020	Farley, Cedar Rapids	Des Moines and Southwestern...	55.37	190	12.2
378	N. H..	342	262	Hooksett, Pittsfield..	Suncook Valley.....	20	186	5
379	Fla..	6402	.....	Lake City, Quincy...	Jacksonville, Pensacola and Mobile.	131.25	186	13

the rates of pay per mile on certain railroad routes, &amp;c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Amount of annual pay.				
<i>Feet and inches.</i>		<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>		
12 by 8, f. f., a. l.	12	55 00	50 00	4,015 00	3,550 00	July 1, 1873	343
18 by 9, f. f., a. l.	6	55 00	50 00	3,500 40	3,364 00	July 1, 1873	344
19 by 6.7, f. f., no r. a.	12	55 00	50 00	1,153 00	1,030 00	July 1, 1873	345
9 by 7, f. f., a. l.	12	55 00	50 00	2,470 60	2,246 00	July 1, 1873	346
b. c.; no r. a.	12	54 00	50 00	648 00	600 00	July 1, 1873	347
14.10 by 7.6, f. f., a. l.	6	54 00	50 00	5,934 60	5,495 00	July 1, 1873	348
No r. a.	12	54 00	50 00	1,106 00	1,100 00	July 1, 1873	349
12 by 7, f. f., a. l.	6	54 00	50 00	5,838 00	3,240 00	July 1, 1873	350
8.10 by 5.7, f. f., a. l.	6	54 00	50 00	2,321 40	2,205 00	July 1, 1873	351
12 by —, fixtures, a. l.	12	54 00	50 00	1,846 96	1,709 50	July 1, 1873	352
b. c.; no r. a.	12	53 00	100 00	4,203 75	7,105 00	July 1, 1873	353
b. c., no r. a.	6	53 00				July 1, 1873	354
10 by 8, f. f., a. l.	7	53 00	50 00	15,370 00	14,500 00	July 1, 1873	355
11 by 6, f. f., a. l.	6	53 00	50 00	2,426 34	2,289 00	July 1, 1873	356
8 by 7, f. f., a. l.	6	53 00	50 00	3,000 90	2,865 00	July 1, 1873	357
10 by 6, f. f., a. l.	6	53 50	50 00	2,310 00	2,200 00	July 1, 1873	358
12 by 7, fixtures, a. l.	6	52 00	50 00	5,447 00	3,142 50	July 1, 1873	359
15 by 10, f. f., a. l.	6	52 00				Jan. 1, 1873	360
In b. c.; no r. a.	18	50 00	75 00	770 00	1,000 00	July 1, 1873	361
r. p. o., 51.6 by 10.9, f. f. c., m. c., d. l.	26	50 00				July 1, 1873	362
r. p. o., 32 by 10, f. f. c., m. c., a. l., r. a. apt., 24 by 10, f. f. c., a. l. 22.6 m.	14½	50 00				Oct. 1, 1871	363
10 by 8, f. f., a. l.	6	50 00	40 00	1,070 00	656 00	July 1, 1873	364
12.6 by 9, f. f., a. l.	6	50 00				Dec. 20, 1872	365
14 by 7, a. l.	6	50 00	40 00	4,575 00	3,660 00	July 1, 1873	366
7 by 7, f. f., a. l.	6	50 00				Aug. 1, 1872	367
No apt.; no r. a.	10	50 00	75 00	1,150 00	1,735 00	July 1, 1873	368
7 by 6, f. f. c., a. l.	6	50 00	39 00	512 50	400 00	July 1, 1873	369
No r. a.	6	50 00	125 00	367 50	667 50	July 1, 1873	370
No r. a.	12	50 00	60 00	840 00	840 00	July 1, 1873	371
13 by 10, f. f., a. l.	6	50 00	75 00	2,963 50	3,393 75	July 1, 1873	372
0.6 by 6.6, f. f., a. l.	16	50 00	75 00	490 00	735 00	July 1, 1873	373
2.6 by 8, f. f., a. l.	21	50 00	60 00	1,560 50	1,896 60	July 1, 1873	374
0 by 8, f. f., a. l.	6	50 00	40 00	4,605 00	3,684 00	July 1, 1873	375
7 by 1.11, locked; no r. a.	15*	50 00	55 00	1,093 75	1,093 75	July 1, 1873	376
4 by 11, f. f., a. l.	6	50 00	60 00	2,764 50	3,322 20	July 1, 1873	377
10 by 2.10, f. f., d. l. 2 m., 1½ l. 4 m.	11*	50 00	30 00	1,000 00	600 00	July 1, 1873	378
2.4 by 6.9, f. f., a. l.	7	50 00	75 00	6,563 50	9,843 75	Oct. 24, 1873	379

F.—Table showing the re-adjustment, under the act of March 3, 1873

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	Pounds.	
380	Ill ....	11911	23047	Chester, Tamaroa....	Chester and Tamaroa Coal and Railroad Company.	42	195	15
381	Pa ...	2428	.....	Harrisburgh, Auburn	Philadelphia and Reading.....	58.30	179	24
382	Wis ..	13012	25019	Sheboygan, Princeton	Sheboygan and Fond du Lac ..	79.05	179	20
383	N. Y..	1005	1260	Stapleton, Tottenville	Staten Island.....	21	171	25
384	Iowa ..	11012b	27002	Cedar Rapids, Postville.	Burlington, Cedar Rapids and Minnesota.	99.80	162	14
385	Ky ..	9842	20015	Owensborough, Owensborough Junction.	Evansville, Owensborough and Nashville, (late Owensborough and Russellville.)	36.13	158	15
386	N. Y..	.....	1290	Buffalo, Gowanda....	Buffalo and Jamestown.....	34.25	155	15
387	Me ...	84	4	Calais, Princeton ....	Saint Croix and Penobscot.....	21	150	20
388	Pa ....	2411	.....	Penn Haven Junction, Mount Carmel.	Lehigh Valley.....	50	142	20
389	Tenn ..	10004	19004	Wartrace Depot, Shelbyville.	Nashville, Chattanooga and Saint Louis, (late Nashville and Chattanooga.)	8	142	15
390	Iowa ..	11005a	27015	Summerset Junction, Winterset.	Chicago, Rock Island and Pacific.	27.10	142	17
391	Mass ..	732	654	East Salisbury, Amesbury.	Eastern.....	4	141	20
392	N. Y..	1518	1280	Plattsburgh, Au Sable Forks.	Whitehall and Plattsburgh....	23	140	22
393	Ill ....	11903	23025	Maysville, Pittsfield ..	Toledo, Wabash and Western.	6	135	15
394	Ill ...	11900	23032	Mc Leansborough, Shawneetown.	Saint Louis and Southeastern, Consolidated, (late Saint Louis and Southeastern.)	41.25	135	12
395	Ill ....	11427	23024	Pekin, Decatur .....	Toledo, Wabash and Western.	68.46	134	22
396	Mich ..	12527	24026	Grand Rapids, Newaygo.	Grand Rapids, Newaygo and Lake Shore.	36.40	132	15
397	Conn ..	938	906	Farmington, New Hartford.	New Haven and Northampton.	16	130	25
398	Md ...	3515	.....	Bowie, Pope's Creek.	Baltimore and Potomac.....	48.68	125	20
399	N. C ...	5280	.....	Greensborough, Salem	Northwestern North Carolina.	29.31	119	15
400	S. C....	5610	.....	Alston, Spartanburgh C. H.	Spartanburgh and Union.....	68.75	119	15
401	Conn ..	943	909	Van Dusenenville, State Line.	Housatonic.....	11	113	28
402	Pa ....	2455	.....	Wilmington, Birdsborough.	Wilmington and Reading.....	63.60	112	15
403	Va....	4408	.....	Richmond, West Point.	Richmond and York River ....	40	112	20
404	Pa ....	2474	.....	Marion Junction, Richmond Furnace.	Cumberland Valley .....	21.44	111	28
405	Iowa ..	11020a	27023	Benlah, Elkader .....	Iowa Eastern.....	17.75	110	15
406	Ohio ..	9045	.....	Black River, Uhricks-ville.	Lake Shore and Tuscarawas Valley.	102.45	105	20
407	Pa ....	2475	.....	Mount Dallas Station, Cumberland.	Pennsylvania .....	47.60	106	20
408	Ohio ..	9031	.....	Xenia, Springfield ...	Little Miami .....	19	104	25
409	Ill ....	11902	23013	Mendota, Clinton ....	Chicago, Burlington and Quincy	64.19	103	20
410	Iowa ..	11017b	27013	Stanwood, Tipton....	Chicago and Northwestern....	8.81	101	24
411	Ind ...	12015	22015	Fairland, Martinsville	Cincinnati and Martinsville...	32.50	100	15
412	Conn ..	942	908	Waterbury, Watertown.	Naugatuck.....	5.75	92	15
413	Ill ...	11411	23027	La Harpe, Burlington	Toledo, Peoria and Warsaw...	19.25	90	20
414	Tenn ..	10005	19005	Fayetteville, Decherd	Southern Railway Security Company.	40	92	14
415	N. J ...	2105	.....	Bordentown, Trenton	Pennsylvania .....	6	88	20
416	Cal ...	14707	46007	Davisville, Knight's Landing.	California Pacific.....	13.20	82	20



of the rates of pay per mile on certain railroad routes, &amp;c.—Continued.

				Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
Feet and inches.		Dolls.	Dolls.	Dolls.	Dolls.			
23 by 6.6, f. f., a. l.	6	50 00	40 00	2,100 00	1,680 00	July 1, 1873	0.07 mile increase...	380
7.9 by 3.7, f. f., a. l.	7½*	50 00	40 00	2,915 00	2,332 00	July 1, 1873	.....	381
10 by 7.8, f. f., a. l.	6½*	50 00	60 00	4,012 50	4,803 00	July 1, 1874	\$60 mail-messenger	382
No apt.; no r. a.	12	50 00	85 71	1,800 00	1,800 00	July 1, 1873	\$750 side service now	383
9.11 by 7.7, f. f., a. l.	6	50 00	40 00	4,990 00	3,992 00	July 1, 1873	.....	384
9 by 6, f. f., a. l. ....	6	50 00	30 00	1,806 50	1,023 90	July 1, 1873	.....	385
r a in h. o. ....	6	50 00	.....	.....	.....	Apr. 1, 1873	New; ordered April, 1874.	386
10 by 7, f. f.; no r. a.	6	50 00	100 00	2,100 00	2,100 00	July 1, 1873	\$1,050 mail-messenger now.	387
10 by 7, f. f., a. l. ....	9½*	50 00	40 00	2,500 00	2,000 00	July 1, 1873	.....	388
No r. a. ....	6	50 00	40 00	400 00	320 00	July 1, 1873	Branch; main route \$205, \$145, (63,114.)	389
10 by 8, f. f., a. l. ....	6	50 00	40 00	1,356 00	1,084 00	July 1, 1873	Branch; main route \$50, (364.)	390
No r. a. ....	15*	50 00	62 50	250 00	250 00	July 1, 1873	\$50 mail-messenger now.	391
No apt.; no r. a. ....	6	50 00	43 47	1,150 40	1,000 00	July 1, 1873	.....	392
12 by —, f. f. ....	6	50 00	.....	.....	.....	July 1, 1873	New; ordered April, 1874. Branch, main route \$87.50, (195.)	393
12 by 6.6, f. f., a. l. ....	6	50 00	40 00	2,062 50	1,650 00	July 1, 1873	.....	394
12 by —, f. f., a. l. ....	6	50 00	40 00	3,423 00	2,738 40	July 1, 1873	.....	395
12 by 7, f. f., a. l. ....	6	50 00	30 00	1,890 00	1,092 00	July 1, 1873	.....	396
12 by 10, f. f., d. l. ....	12	50 00	75 00	800 00	1,300 00	July 1, 1873	Branch; main route \$160, (99.)	397
13 by 8.6, f. f., a. l. ....	6	50 00	.....	.....	.....	Oct. 22, 1872	New; ordered April, 1874.	398
11 by 8, f. f., a. l. ....	6	50 00	.....	.....	.....	Nov. 1, 1873	do .....	399
11 by 6.5, f. f., a. l. ....	6	50 00	40 00	3,437 50	2,000 00	July 1, 1873	.....	400
No apt.; no r. a. ....	6	50 00	80 00	550 00	880 00	July 1, 1873	Branch; main route \$86, (196.); branch \$30, (463.)	401
16 by 7, f. f., a. l. ....	6	50 00	40 00	3,180 00	2,544 00	July 1, 1873	.....	402
9.7 by 8.11, f. f., a. l.	6½*	50 00	25 00	2,000 00	1,000 00	July 1, 1873	.....	403
0 by 5, fixtures, a. l.	6	50 00	.....	.....	.....	July 1, 1872	New; ordered July, 1874.	404
0 by 7, f. f., a. l. ....	6	50 00	.....	.....	.....	Dec. 1, 1872	New; ordered Aug., 1873.	405
4 by 7, fixtures, a. l.	7	50 00	.....	.....	.....	July 1, 1872	New; ordered Jan., 1874.	406
2 by 6.11, f. f., a. l. ....	7*	50 00	60 00	2,380 00	2,856 00	July 1, 1873	.....	407
5.6 by 8.6, f. f., a. l.	94	50 00	100 00	950 00	1,900 00	July 1, 1873	Part; residue \$210, (52.)	408
by 7, f. f., a. l. ....	6	50 00	40 00	3,269 50	2,567 60	July 1, 1873	.....	409
o r. a. ....	6	50 00	.....	.....	.....	Jan. 15, 1874	New; ordered July, 1874.	410
1.3 by 6.10, f. f., a. l.	6	50 00	45 00	1,025 00	1,732 50	July 1, 1873	.....	411
o r. a. ....	6	50 00	75 00	287 50	451 25	July 1, 1873	Branch .....	412
9 by 6.7½, f. f. o., a. l.	6	50 00	.....	.....	.....	Aug. 1, 1873	New; ordered June, 1874. Branch, main route \$64, (279.)	413
1 by 8, f. f., a. l. ....	6	50 00	40 00	2,000 00	1,600 00	July 1, 1873	.....	414
by 6.6, fixtures, a. l.	12	50 00	103 00	300 00	618 00	July 1, 1873	Branch, main route \$60, (302.)	415
8 by 8.10, f. f.; no r. a.	7	50 00	73 00	910 00	1,365 00	July 1, 1873	Branch, part; 23.8 miles disc'd. Main route \$91, (177.)	416

F.—Table showing the re-adjustment, under the act of March 3, 1873,

				Company	Length of route.	Average weight of mails whole delivery per day	Miles per hour	
					Miles.	Pounds.		
				.....	62.10	28	28	
				y....	13.00	28	12	
				and	18	25	20	
430	Mass	690	646	Greenfield, Turner's	Vermont and Massachusetts...	5	21	21
431	Wis	13019	25032	Tomah, Grand Rapids	Wisconsin Valley .....	48	79	20
432	Cal..	14702	46008	Gilroy, Hollister .....	Southern Pacific.....	14	71	20
433	Ill...	11918	23050	Paris, Danville.....	Paris and Danville .....	36	67	18
434	Pa....	2470	.....	Union City, Titusville	Oil Creek and Allegheny River and Buffalo, Corry and Pittsburgh, (late Allegheny Valley.)	14.10	6	15
435	Conn	945	910	Branchville, Ridgefield.	Danbury and Norwalk .....	4	53	20
436	N. Y	.....	1292	Crawford Junction, Pine Bush.	New York and Oswego Midland	10.18	53	13
437	Iowa	11003	27009	Villisca, Clarinda .....	Burlington and Missouri River	16	56	14
438	Ark	7525a	.....	Chicot, Pine Bluff....	Texas, Mississippi River and Northwestern, (late Little Rock, Pine Bluff and New Orleans.)	72.78	268	12
439	Mich	12525	24024	Ypsilanti, Bankers..	Detroit, Hillsdale and Indiana.	63.40	99	22
430	Pa....	2437	.....	Perkiomen Junction, Green Lane.	Philadelphia and Reading .....	17.92	26	15
431	Ark..	7502a	.....	Helena, Clarendon ..	Arkansas Central .....	48.08	64	20
432	Ga...	6231	.....	Columbus, Hamilton	North and South .....	23.51	47	12
433	Ky..	9824	20014	Grayson, Greenup Court-House.	Eastern Kentucky .....	23.75	142	14
434	Ky..	9609	20008	Junction, Bardstow	Louisville and Nashville .....	17.30	127	12
435	Iowa	11015	27024	Clinton, Anamosa ..	Chicago and Northwestern .....	74.10	169	22
436	Iowa	11005b	27016	Washington, Sigourney.	Chicago, Rock Island and Pacific.	90	160	14
437	Ill...	11408	23004	Elgin, Geneva .....	Chicago and Northwestern .....	44	62	20
438	Mich	12949	24030	East Saginaw, Saint Louis.	Saginaw Valley and St. Louis..	33.20	61	20
439	Tenn	10012	10011	Morristown, Riverside.	Cincinnati, Cumberland Gap and Charleston.	39.80	60	11
440	Wis	13080	25018	Manitowoc, Appleton	Milwaukee, Lake Shore and Western.	44.50	72	15
441	Mass.	633	635	South Abington, Bridgewater.	Old Colony and Newport .....	7.75	22	25
442	Mich	12954	24033	Ionia, Stanton .....	Detroit, Lansing and Lake Michigan.	25.30	70	20
443	Ala..	6816	.....	Opelika, Dadeville ..	Savannah and Memphis .....	30.59	66	14
444	N. Y..	1567	1810	Goshen, Pine Island..	Erie, (late Goshen and Decker-town.)	11	63	20
445	Pa....	2460	.....	Lebanon, Tower City	Philadelphia and Reading .....	43.10	62	14
446	Wis..	13018	25017	Stevens Point, Colby	Wisconsin Central, operated by Phillips & Colby Construction Company.	42.93	61	15
447	Tenn.	10015	10014	Memphis, Covington	Paducah and Memphis.....	38.31	62	12
448	W. Va.	4189	.....	Laurel Junction, Volcano.	Laurel Fork and Sand Hill .....	8	60	15
449	Del..	3405	.....	Wilmington, Landonburgh.	Wilmington and Western .....	19.53	54	19
450	Mass	621	620	Salem, Lawrence....	Eastern .....	20	60	20
451	Ill....	11909	23048	Jacksonville, Virden.	Jacksonville, Northwestern and Southeastern.	31.30	60	15
452	Iowa	11012a	27004	Muscataine, Lone Tree	Burlington, Cedar Rapids, and Minnesota.	23.23	61	11
453	Iowa	11012b	27003	Vinton, Traer.....	do .....	24.77	61	14

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
<i>Feet and inches.</i>		<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>			
9.4 by 6.6, f. f., a. l.	6	50 00				July 1, 1873	New; ordered June, 1874.	417
11 by 7.6, f. f., a. l.	12	50 00				Dec. 1, 1873	New; ordered July, 1874.	418
Locked-closet in b. c.	6	50 00				Oct. 16, 1873	New; ordered October, 1873.	419
No r. a.	12	50 00	100 00	250 00	500 00	July 1, 1873	Part; residue, \$170, \$160, (93, 98)	420
11 by 9, f. f., a. l.	6	50 00				Sept. 1, 1873	New; ordered May, 1874.	421
No r. a.	7	50 00	100 00	700 00	1,400 00	July 1, 1873	Branch; main route \$80, (219.)	422
10 by 5, f. f., a. l.	6	50 00	30 00	1,800 00	1,080 00	July 1, 1873		423
5 by 7, f. f., a. l.	6	50 00	40 00	705 00	564 00	July 1, 1873		424
No r. a.	12	50 00	30 00	200 00	120 00	July 1, 1873	Branch; main route \$110, (155.)	425
No apt.	6	50 00				Oct. 1, 1873	New; ordered September, 1873.	426
No r. a.	12	50 00	40 00	800 00	640 00	July 1, 1873		427
5 by 4.6, $\frac{1}{2}$ l. (See trips.)	3	45 00				Oct. 1, 1873	New; ordered August, 1873.	428
7.6 by 5.6, f. f., a. l.	6	45 00	40 00	2,943 00	2,616 00	July 1, 1873		429
b. c.; no r. a.	6 $\frac{1}{2}$	45 00	40 00	806 40	716 90	July 1, 1873		430
10 by 8, f. f., a. l.	6	45 00				Feb. 1, 1873	New; ordered March, 1874.	431
3.6 by 2.6; no r. a.	6	45 00	30 00	1,057 95	705 30	July 1, 1873		432
3 by 2.6, a. l.	6	40 00	21 05	950 00	500 00	July 1, 1873		433
No r. a.	6	40 00	31 21	692 00	540 00	July 1, 1873		434
1.6 by 9.6, f. f., a. l.	6	40 00	30 00	2,964 00	2,223 00	July 1, 1873		435
by 6.4, f. f., a. l.	6	40 00	50 00	1,160 00	1,450 00	July 1, 1873		436
1.6 by 9.6, f. f., a. l.	6	40 00	50 00	1,760 00	2,200 00	July 1, 1873		437
No apt.; no r. a.	9	40 00				Feb. 15, 1873	New; ordered January, 1874.	438
2 by 7, f. f., a. l.	6	40 00	25 00	1,592 00	995 00	July 1, 1873		439
No apt.	6	40 00				Oct. 20, 1873	New; ordered June, 1874. Branch; main route \$67, (262.)	440
b. c.; no r. a.	6	40 00	38 70	390 00	380 00	July 1, 1873	\$80 mail-messenger.	441
No apt.; no r. a.	6	40 00				Oct. 1, 1873	New; ordered January, 1874.	442
by 5, f. f., a. l.	6	40 00	30 00	1,223 20	917 40	July 1, 1873		443
by 6, f. f. c., a. l.	6	40 00	22 73	440 00	250 00	July 1, 1873		444
7 by 6.2, 6.10 by 6, f. f., a. l.	7 $\frac{1}{2}$	40 00	30 00	1,724 00	1,293 00	July 1, 1873		445
1.2 by 7.10, f. f., a. l.	6	40 00				Oct. 16, 1873	New; ordered August, 1874.	446
by 3.6, a. l.	6	40 00				Sept. 10, 1873	New; ordered May, 1874.	447
by 2.6; no r. a.	18	40 00	30 00	320 00	240 00	July 1, 1873		448
5 by 6.10, f. f., a. l.	6	40 00				Oct. 21, 1872	New; ordered April, 1874.	449
No r. a.	8 $\frac{1}{2}$	40 00	50 00	800 00	1,000 00	July 1, 1873		450
by 3.3, f. f., a. l.	6	40 00	50 00	1,255 60	1,569 50	July 1, 1873		451
4 $\frac{1}{2}$ by 7.7, f. f., a. l.	6	40 00	30 00	929 20	696 90	July 1, 1873		452
4 $\frac{1}{2}$ by 7.7, f. f., a. l.	6	40 00				Aug. 16, 1873	New; ordered April, 1874.	453

F.—Table showing the re-adjustment, under the act of March 3, 1873,

Order.	State.	Number of route.	New number of route.	Termini.	Corporate title of company carrying the mail.	Length of route.	Average weight of mails whole distance per day.	Miles per hour.
						Miles.	Pounds.	
454	Pa . . . .	2488	.....	Pomeroy, Delaware ..	Pennsylvania, (late Pennsylv- vania and Delaware.)	38. 58	38	6
455	Ill . . . .	11413	23022	Lake Station, Joliet..	Michigan Central.....	45	36	15
456	N. J ..	2109	.....	Pemberton Junction, Hightstown.	Pennsylvania.....	27. 50	35	30
457	Cal ...	14728	46013	Wilmington, Los An- geles.	Los Angeles and San Pedro....	22	35	20
458	N. J ..	2131	.....	Kinkora Junction, New Lisbon.	Pennsylvania.....	14. 41	31	25
459	Ind ...	12029	22029	Terre Haute, Martz..	Cincinnati and Terre Haute...	26. 15	52	16
460	Mich .	12948	24014	Flint, Otter Lake.....	Flint and Père Marquette.....	19½	43	11
461	Pa . . . .	2407	.....	Bridgeport, Down- ingtown.	Philadelphia and Reading .....	21. 48	34	17
462	Mich .	12953	24032	Muskegon, Big Rapids	Chicago and Michigan Lake Shore.	56. 64	30	20
463	Conn .	943	909	Danbury, Brookfield .	Housatonic.....	5. 50	30	22
464	Wis ..	13014	25014	Stillwater Junction, Stillwater.	West Wisconsin.....	3. 25	27	23
465	Pa . . . .	2477	.....	Conshohocken, Flour- town.	Philadelphia and Reading .....	7. 25	24	15½
466	N. H..	.....	351	Wolfborough Junc- tion, Wolfborough.	Eastern .....	12. 11	11	24

Increase over former amount of annual pay by re-adjustment.....

of the rates of pay per mile on certain railroad routes, &c.—Continued.

Size, &c., of mail car or apartment.	Trips per week.	Pay per mile per annum.	Former pay per mile per annum.	Amount of annual pay.	Former amount of annual pay.	Date of re-adjustment or adjustment.	Remarks.	Order.
<i>Feet and inches.</i>		<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>	<i>Dolls.</i>			
No apt. ....	13	40 00	.....	.....	.....	Apr. 1, 1874	New .....	454
r. a. in b. c. ....	6	40 00	25 00	1,800 00	1,125 00	July 1, 1873	.....	455
8 by 6.6, fixtures, a. l.	6	40 00	50 00	1,100 00	1,375 00	July 1, 1873	Part; residue \$75...	456
No apt. ....	6	40 00	75 00	880 00	1,650 00	July 1, 1874	.....	457
No apt. ....	6	40 00	50 00	576 40	720 50	July 1, 1873	.....	458
r. a. in b. c., a. l. ....	6	35 00	.....	.....	.....	Oct. 21, 1872	New; ordered January, 1874.	459
r. a., a. l. No distribution.	6	30 00	.....	.....	.....	Feb. 1, 1873	New; ordered January, 1874.	460
No r. a. ....	6	30 00	25 00	644 40	537 00	July 1, 1873	.....	461
12 8 by 7, fixtures; no r. a.	6	30 00	.....	.....	.....	Sept 10, 1873	New; ordered January, 1874.	462
No apt; no r. a. ....	6	30 00	80 00	165 00	440 00	July 1, 1873	Branch; main route \$86, (196.) Branch \$50, (401.)	463
b. c.; no r. a. ....	6	30 00	.....	.....	.....	Oct. 16, 1873	New; ordered April, 1874. Branch; main route \$100, (173.)	464
No r. a. ....	6	30 00	.....	.....	.....	Mar. 17, 1873	New; ordered April, 1874.	465
No r. a. ....	12	30 00	.....	.....	.....	July 1, 1873	New; ordered April, 1874.	466
				6,493,567 68	5,239,240 22			
				5,239,240 22	.....			
				1,254,327 46	.....			

JOHN L. ROUTT,  
Second Assistant Postmaster-General.

G.—Statement of the number, description, and cost of mail-bags and mail-catchers purchased by contract and put into service during the year ended June 30, 1874.

Number.	Description.	Size.	Price.	Cost.	Aggregate.
1,250	Leather mail-pouches .....	No. 1	\$8 20	\$10,250 00	\$73,907 30
2,850	.....do.....	No. 2	6 45	18,382 50	
4,250	.....do.....	No. 3	5 50	23,375 00	
3,600	.....do.....	No. 4	4 35	15,660 00	
1,950	.....do.....	No. 5	3 20	6,240 00	
13,900					
250	Leather horse mail-bags.....	No. 1	6 65	1,662 50	2,742 30
100	.....do.....	No. 2	5 65	565 00	
100	.....do.....	No. 3	5 15	515 00	
450					
6	Canvas mail-pouches .....	No. 1	4 85	29 10	5,275 92
43	.....do.....	No. 2	3 90	167 70	
8	.....do.....	No. 3	3 45	27 60	
268	.....do.....	No. 4	2 89	774 52	
240	.....do.....	No. 5	2 65	636 00	
1,100	Catcher mail-pouches.....		3 31	3,641 00	
1,665					
1,033	Cotton canvas mail-sacks.....	No. 1	97	1,002 01	3,312 39
973	.....do.....	No. 2	74½	724 88	
7,550	.....do.....	No. 3	21	1,585 50	
9,556					
50,000	Jute canvas mail-sacks .....	No. 1	57	28,500 00	28,650 00
1,000	.....do.....	No. 3	15	150 00	
51,000					
400	Mail-bag catchers.....		15 00	6,000 00	6,221 00
400	Socketts for same .....		50	200 00	
30	.....do.....		70	21 00	
13,987	Mail-bag-label cases .....		25	3,496 75	4,794 44
188,755	Printed wooden labels.....		11-16	1,297 69	
					194,903 75

Number and cost of mail locks and keys purchased and repaired during the year ended June 30, 1874.

Number.	Description.	Price.	Cost.
40,000	New iron mail-locks.....	\$0 58	\$23,200 00
10,000	New brass mail-locks.....	74	7,400 00
2,732	Old iron mail-locks repaired.....	10	273 20
6,013	Old brass mail-locks repaired.....	5	300 65
330	Old iron mail-keys repaired.....	2	6 60
			31,180 45

JOHN L. ROUTT,  
Second Assistant Postmaster-General.



11.—Railway post-office lines in the United States June 30, 1874, showing the increase in the service since June 30, 1873.

Terminal points.	Miles of route.	Miles of service.	Service each way.	Number of clerks.			Increase of miles of route from June 30, 1873, to June 30, 1874.	Increase of miles of service from June 30, 1873, to June 30, 1874.	Increase in number of clerks from June 30, 1873, to June 30, 1874.			Increase in lines of railway post-offices from June 30, 1873, to June 30, 1874.
				\$1,400.	\$1,500.	\$1,600.			\$1,400.	\$1,500.	\$1,600.	
.....	298	1,198	Twice daily.....	11	8	8	.....	.....	.....	.....	.....	.....
.....	171	342	Daily.....	.....	4	.....	.....	.....	.....	.....	.....	.....
.....	325	650	do.....	6	5	.....	.....	.....	.....	.....	.....	.....
.....	295	1,180	Twice daily.....	10	15	17	.....	.....	1	.....	3	.....
.....	990	560	Daily.....	4	.....	.....	.....	.....	.....	.....	.....	.....
.....	50	100	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	900	900	Twice daily.....	10	8	4	.....	.....	2	.....	.....	.....
.....	122	944	Daily.....	.....	6	.....	.....	.....	.....	.....	.....	.....
.....	116	222	do.....	4	4	1	42	54	4	1	1	.....
.....	240	936	Twice daily.....	11	13	.....	.....	.....	.....	2	.....	.....
.....	245	484	Daily.....	4	6	4	.....	.....	.....	.....	.....	.....
.....	118	226	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	291	582	do.....	4	4	.....	.....	.....	.....	.....	.....	.....
.....	900	400	do.....	2	4	.....	.....	.....	(d)	1	.....	.....
.....	280	1,120	Twice daily.....	6	10	1	30	1,120	6	10	1	1
.....	140	280	Daily.....	3	3	.....	.....	.....	.....	.....	.....	.....
.....	242	484	do.....	4	9	.....	.....	.....	(e)	3	.....	.....
.....	263	526	do.....	5	11	.....	.....	.....	(d)	1	.....	.....
.....	188	376	do.....	5	4	.....	.....	.....	.....	.....	.....	.....
.....	237	474	do.....	6	6	.....	.....	.....	1	.....	.....	.....
.....	219	438	do.....	4	6	.....	.....	.....	.....	.....	.....	.....
.....	258	516	do.....	5	8	.....	.....	.....	.....	.....	.....	.....
.....	310	620	do.....	1	2	.....	.....	.....	.....	.....	.....	.....
.....	280	560	do.....	5	8	.....	310	620	1	8	.....	1
.....	243	486	Twice daily.....	7	13	14	.....	.....	.....	.....	.....	.....
.....	244	488	Daily.....	5	7	.....	.....	.....	1	1	.....	.....
.....	283	565	do.....	4	4	.....	.....	.....	(d)	.....	.....	.....
.....	112	224	do.....	2	4	.....	.....	.....	.....	.....	.....	.....
.....	21	168	Four times daily.....	.....	2	.....	.....	.....	1	(d)	.....	.....
.....	350	700	Daily.....	4	5	.....	.....	.....	.....	.....	.....	.....
.....	340	680	do.....	4	11	.....	.....	.....	(e)	4	.....	.....
.....	214	428	do.....	4	9	.....	.....	.....	.....	.....	.....	.....
.....	284	568	do.....	3	7	.....	.....	.....	(d)	1	.....	.....
.....	307	614	do.....	3	8	.....	.....	.....	(d)	1	.....	.....

a Formerly Boston, Mass., to South Berwick, Me.

b Formerly Bloomington, Ill., to Saint Louis, Mo.

c Termini of route changed from Green Bay to Fort Howard.

d Reduction of one.

e Reduction of two.

## H.—Railway post-office lines in the United States June 30, 1874, showing the increase in the service since June 30, 1873—Continued.

Terminal points	Miles of route.	Miles of service.	Service each way.	Number of clerks.			Increase of miles of route from June 30, 1873, to June 30, 1874.	Increase of miles of service from June 30, 1873, to June 30, 1874.	Increase in number of clerks from June 30, 1873, to June 30, 1874.			Increase in lines of railway post-offices from June 30, 1873, to June 30, 1874.
				\$1,400.	\$1,900.	\$1,000.			\$1,400.	\$1,900.	\$1,000.	
.....	275	550	Daily	5	6	.....	309	1,236	(a)	1	.....	1
.....	309	1,236	Twice daily	1	16	.....	303	466	1	16	.....	1
.....	276	552	Daily	3	9	.....	.....	.....	(a)	8	.....	.....
.....	575	1,150	do	1	18	.....	143	296	1	4	.....	.....
.....	251	502	do	5	4	.....	.....	.....	1	1	.....	.....
.....	254	508	do	1	7	.....	264	396	1	7	.....	.....
.....	200	400	do	3	4	.....	.....	.....	.....	.....	.....	.....
.....	185	370	do	3	6	.....	.....	.....	.....	.....	.....	.....
.....	273	546	do	6	13	.....	.....	.....	1	1	.....	.....
.....	203	406	do	4	6	.....	.....	.....	.....	.....	.....	.....
.....	324	648	do	7	11	.....	.....	.....	.....	.....	.....	.....
.....	310	620	do	7	6	.....	.....	.....	1	(a)	.....	.....
.....	206	412	do	.....	4	.....	.....	.....	.....	.....	.....	.....
.....	234	468	Twice daily	11	19	.....	.....	.....	.....	21	(a)	.....
.....	272	544	do	11	10	.....	.....	.....	.....	(a)	3	.....
.....	422	1,092	do	14	13	.....	.....	.....	1	1	.....	.....
.....	144	288	do	4	4	.....	.....	.....	.....	.....	.....	.....
.....	1,039	2,078	Daily	14	20	.....	.....	.....	(a)	.....	.....	.....
.....	358	716	do	6	5	.....	.....	.....	(a)	(a)	1	.....
.....	43	86	do	1	1	.....	.....	.....	(a)	(a)	.....	.....
.....	251	502	do	4	5	.....	.....	.....	(a)	(a)	.....	.....
.....	77	154	do	.....	3	.....	.....	.....	(a)	.....	.....	.....
.....	339	678	do	5	6	.....	.....	.....	.....	.....	.....	.....
.....	281	562	do	11	15	.....	.....	.....	.....	.....	.....	.....
.....	203	406	do	3	16	.....	.....	.....	(a)	4	.....	.....
.....	216	432	Twice daily	9	12	.....	.....	.....	(a)	(a)	3	.....
.....	179	358	Daily	3	5	.....	.....	.....	(a)	.....	.....	.....
.....	128	256	do	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Reduction of one.  
 b Reduction of four.  
 c Reduction of five.  
 d Reduction of ten.

a Consolidation of Freeport & Bloomington and Bloomington & Centralia lines, shown on last report.

b Formerly Redalia, Mo., to Denison, Texas.

c Station from Freeport to Galveston, Ill., included in Indianapolis, Ind., to Galveston, Ill.

d Number of clerks included in New York, N. Y., to Buffalo, N. Y.

Memphis, Tenn., to Chattanooga, Tenn.  
 New Orleans, La., to Canton, Miss.  
 New York, N. Y., to Boston, Mass.  
 New York, N. Y., to Washington, D. C.  
 New York, N. Y., to Buffalo, N. Y.

	June 30, 1873.	June 30, 1874.	Increase.
Number of lines of railway post-offices.....	59	63	4
Aggregate number of miles of the above.....	14,866	16,414	1,548
Number of miles of actual service performed daily.....	34,925	39,199	4,274
Number of miles of actual service performed annually.....	12,747,625	14,307,635	1,560,010
Number of head clerks, at \$1,400 per annum.....	283	288	5
Number of clerks, at \$1,200 per annum.....	379	465	86
Number of assistant clerks, at \$1,000.....	90	97	7
	<hr/> 752	<hr/> 850	<hr/> 98
Making total number of clerks.....	\$941,000.00	\$1,058,200.00	\$117,200.00
With annual compensation amounting to .....			

H.—Railway post-office lines in the United States June 30, 1874, showing the increase in the service since June 30, 1873—Continued.

Terminal points.	Miles of route.	Miles of service.	Service <del>and</del> way.	Number of clerks.			Increase of miles of route from June 30, 1873, to June 30, 1874.	Increase of miles of service from June 30, 1873, to June 30, 1874.	Increase in number of clerks from June 30, 1873, to June 30, 1874.			Increase in lines of railway post-offices from June 30, 1873, to June 30, 1874.
				\$1,400.	\$1,500.	\$1,000.			\$1,400.	\$1,500.	\$1,000.	
.....	975	550	Daily .....	5	6	.....	309	1,236	(a) 1	.....	.....	.....
.....	309	1,236	Twice daily .....	1	16	.....	253	466	.....	16	.....	1
.....	253	466	Daily .....	.....	8	.....	.....	.....	.....	8	.....	.....
.....	276	532	do .....	3	9	.....	.....	.....	(a) 1	3	.....	.....
.....	1,150	1,150	do .....	1	19	.....	143	986	.....	4	.....	.....
.....	575	575	do .....	5	4	.....	.....	.....	.....	1	.....	.....
.....	903	903	do .....	1	7	.....	304	589	.....	7	.....	1
Iowa .....	900	400	do .....	3	4	.....	.....	.....	.....	.....	.....	.....
.....	185	370	do .....	3	6	.....	.....	.....	.....	.....	.....	.....
.....	273	546	do .....	6	13	.....	.....	.....	.....	.....	.....	.....
.....	903	406	do .....	4	6	.....	.....	.....	.....	.....	.....	.....
.....	304	648	do .....	7	11	.....	.....	.....	.....	.....	.....	.....
.....	310	620	do .....	7	6	.....	.....	.....	.....	(a) 1	.....	.....
New Orleans, La., to Canton, Miss .....	906	412	do .....	.....	4	.....	.....	.....	.....	.....	.....	.....
New York, N. Y., to Boston, Mass .....	234	936	Twice daily .....	11	19	9	.....	.....	.....	11	(e) 1	.....
New York, N. Y., to Washington, D. C. ....	272	928	do .....	11	10	10	.....	.....	.....	(d) 3	.....	.....
New York, N. Y., to Buffalo, N. Y. ....	422	1,688	do .....	14	13	14	.....	.....	.....	1	.....	.....
.....	144	576	do .....	4	4	5	.....	.....	.....	.....	.....	.....
New York, N. Y., to Albany, N. Y. ....	1,039	2,084	Daily .....	14	20	.....	.....	.....	(a) 1	.....	.....	.....
.....	356	716	do .....	6	5	6	.....	.....	(a) 1	.....	.....	.....
.....	43	66	do .....	1	1	.....	.....	.....	(a) 1	.....	.....	.....
.....	361	522	do .....	4	5	.....	.....	.....	(a) 1	.....	.....	.....
Y .....	77	154	do .....	.....	3	.....	.....	.....	(a) 1	.....	.....	.....
.....	330	600	do .....	5	8	.....	.....	.....	(a) 1	.....	.....	.....
.....	821	1,702	do .....	11	15	.....	.....	.....	(a) 1	.....	.....	.....
.....	903	406	do .....	3	10	.....	.....	.....	(a) 1	.....	.....	.....
Washington, D. C., to Weldon, N. C. ....	218	864	Twice daily .....	9	12	3	.....	.....	(a) 1	.....	.....	.....
Washington, D. C., to Lynchburg, Va. ....	178	356	Daily .....	3	5	.....	.....	.....	(a) 1	.....	.....	.....
Hornellsville, N. Y., to Dunkirk, N. Y. ....	168	256	do .....	.....	.....	.....	.....	.....	(a) 1	.....	.....	.....

a Consolidation of Freeport & Bloomington and Bloomington & Centralia lines, shown on last report.

b Formerly Medalla, Mo., to DeLeon, Texas.

c Distance from Freeport to Galveston, Ill., included in Indianapolis, Ind., to Galveston, Ill.

d Number of clerks included in New York, N. Y., to Buffalo, N. Y.

e Reduction of one.  
e Reduction of four.  
e Reduction of five.  
e Reduction of two.

	June 30, 1873.	June 30, 1874.	Increase.
Number of lines of railway post-offices.....	59	63	4
Aggregate number of miles of the above.....	14,866	16,414	1,548
Number of miles of actual service performed daily.....	34,925	39,199	4,274
Number of miles of actual service performed annually.....	12,747,625	14,307,635	1,560,010
Number of head clerks, at \$1,400 per annum.....	283	288	5
Number of clerks, at \$1,200 per annum.....	379	465	86
Number of assistant clerks, at \$1,000.....	90	97	7
Making total number of clerks.....	752	850	98
With annual compensation amounting to.....	\$941,000.00	\$1,058,900.00	\$117,900.00

## THROUGH-MAIL TABLES.

## 1.—Through mails to San Francisco from Washington.

ROUTE.—From Washington, D. C., via Parkersburgh, W. Va., Cincinnati, Ohio, Peoria, Ill., Galesburg, Ill., Burlington, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—3,151 miles.

## TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873 .....	30	5,725	05	190	50	166	30	214	50	2	28	28	.....	.....
November, 1873 .....	31	5,772	20	186	12	166	25	214	30	9	22	22	.....	.....
December, 1873 .....	31	5,683	20	183	20	168	40	211	30	14	17	17	.....	.....
January, 1874 .....	31	5,739	05	185	08	168	40	219	00	11	20	20	.....	.....
February, 1874 .....	27	4,951	40	183	23	168	40	229	50	11	16	14	.....	.....
March, 1874 .....	32	5,891	35	184	06	168	40	229	50	14	18	14	.....	.....
April, 1874 .....	30	5,189	45	172	59	168	40	193	00	25	5	3	.....	.....
May, 1874 .....	31	5,314	10	171	25	168	40	193	00	28	3	3	.....	.....
June, 1874 .....	30	5,167	05	172	14	169	30	193	30	27	3	2	.....	.....
July, 1874 .....	31	5,311	20	171	20	169	25	195	45	29	2	2	.....	.....
August, 1874 .....	31	5,372	25	173	18	169	10	193	30	26	5	5	.....	.....
September, 1874 .....	30	5,130	30	171	01	167	25	193	20	27	3	2	.....	.....
Whole period ....	365	65,248	20	178	45	166	25	229	50	223	142	134	.....	6

## 2.—Through mails to Washington from San Francisco.

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., Burlington, Iowa, Galesburgh, Ill., Peoria, Ill., Cincinnati, Ohio, and Parkersburgh, W. Va., to Washington, D. C.—3,151 miles.

## TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873 .....	31	5,319	20	171	35	169	45	179	00	28	3	.....	.....	.....
November, 1873 .....	30	5,054	35	168	29	167	05	172	30	27	3	.....	.....	.....
December, 1873 .....	31	5,256	00	169	32	167	30	191	30	29	2	1	.....	.....
January, 1874 .....	31	5,262	00	169	44	167	30	194	15	29	2	2	.....	.....
February, 1874 .....	28	4,734	10	169	04	167	30	191	30	27	1	1	.....	.....
March, 1874 .....	31	5,691	25	183	35	167	30	239	30	16	15	14	.....	.....
April, 1874 .....	30	5,043	40	168	07	167	30	178	50	29	1	.....	.....	.....
May, 1874 .....	31	5,235	25	168	53	167	30	191	30	29	2	1	.....	.....
June, 1874 .....	30	5,146	05	171	32	168	15	172	45	30	.....	.....	.....	.....
July, 1874 .....	31	5,264	15	169	48	166	30	191	40	28	3	1	.....	.....
August, 1874 .....	31	5,237	45	168	57	167	30	191	30	30	1	1	.....	.....
September, 1874 .....	30	5,079	20	169	18	167	30	191	30	29	1	1	.....	.....
Whole period ....	365	62,324	00	170	45	166	30	239	30	331	34	22	.....	.....



3.—Through mails to San Francisco from New York.

ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., (also from New York, via Erie, Pa.) Chicago, Ill., Clinton, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—3,307 miles, (3,370 miles via Erie, Pa.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	56	9,742	10	173	58	168	15	183	30	56	.....	.....	.....	.....
November, 1873.....	51	8,867	45	173	52	168	10	183	05	51	.....	.....	.....	.....
December, 1873.....	50	8,816	30	176	18	168	10	199	00	45	5	4	.....	3
January, 1874.....	52	9,078	15	174	34	168	10	184	45	46	6	.....	.....	2
February, 1874.....	49	8,672	15	176	59	168	10	217	20	41	8	5	.....	4
March, 1874.....	54	9,740	00	180	22	168	10	229	20	34	20	9	.....	6
April, 1874.....	55	9,564	10	173	53	168	10	182	30	55	.....	.....	.....	.....
May, 1874.....	57	9,923	35	174	05	168	10	183	55	57	.....	.....	.....	.....
June, 1874.....	54	9,437	30	174	46	168	15	192	30	52	2	1	.....	1
July, 1874.....	56	9,750	15	174	06	168	15	182	30	55	1	.....	.....	1
August, 1874.....	53	9,234	25	174	14	168	10	183	40	53	.....	.....	.....	.....
September, 1874.....	54	9,412	50	174	18	166	25	185	00	52	2	.....	.....	1
Whole period...	641	111,239	40	173	32	166	25	229	20	597	44	19	.....	18

4.—Through mails to New York from San Francisco.

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., Clinton, Iowa, Chicago, Ill., Pittsburgh, Pa., and Harrisburgh, Pa., (also, after passing Chicago, via Erie, Pa.) to New York, N. Y.—3,307 miles, (3,370 miles via Erie, Pa.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	5,288	55	170	36	168	35	192	45	28	3	1	.....	1
November, 1873.....	30	5,112	20	170	24	168	40	193	00	27	3	1	.....	1
December, 1873.....	31	5,261	15	169	43	168	30	175	00	27	4	.....	.....	.....
January, 1874.....	31	5,291	25	170	41	168	30	195	15	27	4	1	.....	1
February, 1874.....	28	4,765	25	170	11	168	35	192	45	25	3	1	.....	1
March, 1874.....	31	5,683	35	183	20	168	30	240	50	17	14	14	.....	7
April, 1874.....	30	5,076	40	169	13	168	35	175	50	29	1	.....	.....	.....
May, 1874.....	31	5,283	45	170	26	168	30	193	00	28	3	1	.....	1
June, 1874.....	30	5,070	50	169	10	168	20	174	45	29	1	.....	.....	.....
July, 1874.....	31	5,252	25	169	25	168	30	192	35	30	1	1	.....	1
August, 1874.....	31	5,234	25	168	51	167	30	171	40	31	.....	.....	.....	.....
September, 1874.....	30	5,101	45	170	03	168	30	193	00	29	1	1	.....	1
Whole period...	365	62,422	45	171	01	167	30	240	50	327	38	21	.....	14

## 5.—Through mails to San Francisco from Boston.

ROUTE.—From Boston, Mass., via Albany, N. Y., Buffalo, N. Y., Erie, Pa., Toledo, Ohio, Chicago, Ill., Clinton, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland Cal., to San Francisco, Cal.—3,449 miles.

## TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	5,689	25	183	31	183	15	186	30	31	.....	.....	.....	.....
November, 1873....	30	5,507	05	183	34	183	10	186	05	30	.....	.....	.....	.....
December, 1873.....	31	5,820	05	187	44	183	10	208	15	24	7	4	.....	.....
January, 1874.....	31	5,456	30	176	00	173	10	201	45	26	5	3	.....	.....
February, 1874.....	27	4,858	55	179	57	173	10	221	15	19	8	5	.....	.....
March, 1874.....	32	5,921	35	185	02	173	10	234	20	17	15	11	.....	.....
April, 1874.....	30	5,252	05	175	04	173	10	197	15	28	2	2	.....	.....
May, 1874.....	31	5,409	20	174	29	173	10	200	55	30	1	1	.....	.....
June, 1874.....	30	5,235	40	174	31	173	15	197	15	28	2	1	.....	.....
July, 1874.....	31	5,487	15	177	00	173	10	199	15	26	3	5	.....	.....
August, 1874.....	31	5,421	40	174	53	173	10	198	20	29	2	2	.....	.....
September, 1874....	30	5,205	05	173	30	171	25	178	00	29	1	.....	.....	.....
Whole period...	365	65,264	40	178	48	171	25	234	20	317	48	34	.....	.....

## 6.—Through mails to Boston from San Francisco.

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., Clinton, Iowa, Chicago, Ill., Toledo, Ohio, Erie, Pa., Buffalo, N. Y., and Albany, N. Y., to Boston, Mass.—3,449 miles.

## TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	5,414	45	174	14	170	00	196	00	23	8	3	.....	.....
November, 1873....	30	5,158	30	171	57	169	45	179	00	27	3	.....	.....	.....
December, 1873....	31	5,341	45	172	18	171	30	178	00	29	2	.....	.....	.....
January, 1874.....	31	5,369	00	173	11	171	30	196	00	28	3	1	.....	.....
February, 1874.....	28	4,856	30	173	26	171	30	195	30	25	3	1	.....	.....
March, 1874.....	31	5,775	15	186	17	171	00	244	00	17	14	14	.....	.....
April, 1874.....	30	5,160	30	172	01	171	00	190	00	29	1	.....	.....	.....
May, 1874.....	31	5,383	30	173	39	171	00	195	30	28	3	3	.....	.....
June, 1874.....	30	5,150	45	171	41	171	15	177	00	28	2	.....	.....	.....
July, 1874.....	31	5,380	45	173	34	171	00	195	30	25	6	1	.....	.....
August, 1874.....	31	5,318	30	171	33	171	00	179	00	30	1	.....	.....	.....
September, 1874....	30	5,201	00	173	22	171	00	190	00	26	4	.....	.....	.....
Whole period...	365	63,501	45	174	00	169	45	244	00	315	50	23	.....	.....

7.—Through mails to San Francisco from Cincinnati.

ROUTE.—From Cincinnati, Ohio, via Peoria, Ill., Galesburgh, Ill., Burlington, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—2,539 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	4,697	00	151	30	144	15	168	35	22	9	9	.....	6
November, 1873.....	29	4,550	10	156	54	144	10	168	30	20	9	9	.....	3
December, 1873.....	32	4,946	45	154	33	144	10	192	30	20	12	8	.....	3
January, 1874.....	31	4,835	45	155	59	144	10	193	30	18	13	13	.....	8
February, 1874.....	28	4,227	25	150	58	144	40	181	50	20	8	6	.....	6
March, 1874.....	31	4,949	10	159	39	144	10	205	50	15	16	12	.....	12
April, 1874.....	30	4,397	10	146	34	144	40	168	45	28	2	2	.....	2
May, 1874.....	31	4,549	30	146	45	144	40	172	25	29	2	2	.....	2
June, 1874.....	30	4,475	05	149	10	145	30	169	30	25	5	4	.....	5
July, 1874.....	30	4,424	40	147	29	143	25	169	35	27	3	2	.....	4
August, 1874.....	32	4,704	15	147	00	145	25	169	30	30	2	2	.....	1
September, 1874.....	30	4,498	10	149	56	143	40	174	15	24	6	5	.....	5
Whole period ..	365	55,245	05	151	21	143	25	205	50	278	87	74	.....	61

8.—Through mails to Cincinnati from San Francisco.

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., Burlington, Iowa, Galesburgh, Ill., and Peoria, Ill., to Cincinnati, Ohio—2,539 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	4,569	35	147	24	135	35	161	45	11	20	2	.....	2
November, 1873.....	30	4,252	55	141	45	137	45	147	30	18	12	.....	.....	.....
December, 1873.....	31	4,368	40	140	55	137	35	147	30	20	11	.....	.....	.....
January, 1874.....	31	4,487	00	144	44	137	35	171	15	11	20	1	.....	1
February, 1874.....	28	3,966	50	142	23	137	00	161	35	16	12	1	.....	1
March, 1874.....	31	4,848	30	156	24	137	10	218	30	8	23	13	.....	7
April, 1874.....	30	4,256	00	141	52	137	10	147	15	15	15	.....	.....	.....
May, 1874.....	31	4,379	15	141	15	137	10	146	25	17	14	.....	.....	.....
June, 1874.....	30	4,218	15	140	36	137	10	161	10	20	10	1	.....	1
July, 1874.....	31	4,329	35	139	39	137	10	161	30	24	7	1	.....	1
August, 1874.....	31	4,343	50	140	07	137	10	145	45	21	10	.....	.....	.....
September, 1874.....	30	4,327	40	144	15	137	10	169	45	11	19	2	.....	2
Whole period ...	365	52,368	05	143	28	135	35	218	30	192	173	21	.....	15

9.—Through mails to San Francisco from Chicago.

ROUTE.—From Chicago, Ill., via Clinton, Iowa, Omaha City, Nebr., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—2,406 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	4,039	40	130	18	130	00	133	15	31	.....	.....	.....	.....
November, 1873.....	30	3,917	00	130	34	130	10	133	05	30	.....	.....	.....	.....
December, 1873.....	31	4,129	50	133	13	130	10	156	20	28	5	1	.....	.....
January, 1874.....	31	4,052	25	130	43	130	10	134	45	29	2	.....	.....	.....
February, 1874.....	28	3,756	05	134	09	130	10	167	20	22	6	3	.....	.....
March, 1874.....	31	4,303	45	138	49	130	10	191	20	20	11	4	.....	.....
April, 1874.....	30	3,913	35	130	27	130	10	132	25	30	.....	.....	.....	.....
May, 1874.....	31	4,047	50	130	34	130	10	133	55	31	.....	.....	.....	.....
June, 1874.....	30	3,914	10	130	28	130	00	142	15	29	1	.....	.....	.....
July, 1874*.....	19	2,470	05	130	00	129	55	130	05	19	.....	.....	.....	.....
August, 1874.....	30	3,949	35	131	39	129	25	154	00	28	2	2	.....	.....
September, 1874.....	30	3,907	35	130	15	128	10	134	45	29	1	.....	.....	.....
Whole period...	352	46,401	35	131	47	128	10	191	20	324	28	10	.....	2

\* Transmission of post-bill cards interrupted by fire at Chicago.

10.—Through mails to Chicago from San Francisco.

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Omaha City, Nebr., and Clinton, Iowa, to Chicago, Ill.—2,406 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	4,009	20	129	20	128	00	134	35	29	2	.....	.....	.....
November, 1873.....	30	3,881	05	129	22	129	00	131	25	30	.....	.....	.....	.....
December, 1873.....	31	4,009	55	129	21	128	45	129	40	31	.....	.....	.....	.....
January, 1874.....	31	4,010	50	129	22	123	50	130	10	31	.....	.....	.....	.....
February, 1874.....	28	3,625	30	129	28	129	10	130	45	28	.....	.....	.....	.....
March, 1874.....	31	4,225	25	136	18	129	00	177	35	25	6	6	.....	.....
April, 1874.....	30	3,862	00	129	24	129	00	133	50	29	1	.....	.....	.....
May, 1874.....	31	4,004	10	129	10	128	45	130	00	31	.....	.....	.....	.....
June, 1874.....	30	3,870	40	129	10	128	45	130	55	30	.....	.....	.....	.....
July, 1874.....	31	3,998	40	128	59	128	40	130	00	31	.....	.....	.....	.....
August, 1874.....	31	4,000	25	129	02	128	35	129	25	31	.....	.....	.....	.....
September, 1874.....	30	3,875	55	129	11	128	40	132	10	30	.....	.....	.....	.....
Whole period...	365	47,393	55	129	50	128	00	177	35	356	9	6	.....	0

11.—Through mails to San Francisco from Saint Louis.

ROUTE.—From Saint Louis, Mo., via Kansas City, Mo., Denver City, Colo., Cheyenne, Wyo., Ogden, Utah, Sacramento City, Cal., Stockton, Cal., and Oakland, Cal., to San Francisco, Cal.—2,400 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873 .....	31	4,096	30	132	08	131	50	135	05	31	.....	.....	.....	.....
November, 1873 .....	30	3,964	35	132	09	131	45	134	40	30	.....	.....	.....	.....
December, 1873 .....	31	4,360	05	140	38	132	40	175	30	22	9	7	.....	6
January, 1874 .....	39	5,648	15	144	49	133	10	169	10	28	11	8	.....	6
February, 1874 .....	28	4,082	45	145	49	143	10	167	15	23	5	2	.....	4
March, 1874 .....	31	4,802	15	154	54	143	10	204	20	14	17	8	.....	9
April, 1874 .....	30	4,446	25	148	12	143	10	167	30	24	6	6	.....	4
May, 1874 .....	31	4,623	10	149	08	143	10	170	55	24	7	7	.....	5
June, 1874 .....	30	4,484	15	149	28	143	15	167	20	22	8	7	.....	6
July, 1874 .....	30	4,501	05	150	02	143	10	191	15	22	8	7	.....	8
August, 1874 .....	32	4,758	15	148	41	143	10	191	40	26	6	6	.....	5
September, 1874 .....	29	4,382	35	151	07	143	10	171	00	19	10	9	.....	8
Whole period ...	372	54,150	10	145	33	131	45	204	20	285	87	67	.....	61

12.—Through mails to Saint Louis from San Francisco.

ROUTE.—From San Francisco, Cal., via Oakland, Cal., Stockton, Cal., Sacramento City, Cal., Ogden, Utah, Cheyenne, Wyo., Denver City, Colo., and Kansas City, Mo., to Saint Louis, Mo.—2,400 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails a day or more behind time.	Mails behind others of a later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873 .....	31	4,058	30	130	55	125	15	149	45	23	8	5	.....	5
November, 1873 .....	29	3,786	35	130	34	125	30	152	15	22	7	4	.....	7
December, 1873 .....	32	4,285	50	133	55	125	30	156	00	22	10	8	.....	6
January, 1874 .....	31	4,076	25	131	29	125	15	150	30	24	7	5	.....	7
February, 1874 .....	28	3,713	05	132	37	126	15	150	40	19	9	6	.....	6
March, 1874 .....	31	4,575	15	147	35	126	00	219	15	12	19	16	1	10
April, 1874 .....	30	3,923	35	132	47	126	20	160	45	23	7	2	.....	6
May, 1874 .....	30	4,034	30	134	29	131	05	155	25	24	6	1	.....	7
June, 1874 .....	31	4,125	30	133	04	131	00	146	50	27	4	.....	.....	3
July, 1874 .....	31	4,159	00	134	09	131	05	155	05	26	5	2	.....	5
August, 1874 .....	31	4,200	55	135	11	130	00	157	10	24	7	2	1	6
September, 1874 .....	30	4,040	25	134	40	130	00	156	00	24	6	1	.....	5
Whole period ...	365	49,039	35	134	21	125	15	219	15	270	95	52	2	73

13.—Through mails to New Orleans from Washington.

ROUTE.—From Washington, D. C., via Lynchburgh, Va., Bristol, Tenn., Knoxville, Tenn., Cleveland Tenn., Dalton, Ga., Calera, Ala., (till May 11, 1874, and thence, after passing Dalton, via Atlanta Ga., Montgomery, Ala., and Mobile, Ala., to New Orleans, La.—1,188 miles, (1,216 miles via Atlanta Ga.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	2,204	00	71	05	70	00	94	15	30	1	1	.....	..
November, 1873*.....	30	2,246	05	74	52	69	15	106	15	25	5	4	.....	..
December, 1873.....	31	2,451	00	79	03	77	15	101	30	28	3	2	.....	..
January, 1874.....	31	2,546	30	82	08	77	15	125	30	23	8	4	.....	..
February, 1874.....	28	2,430	30	86	48	77	15	127	45	18	10	3	3	..
March, 1874.....	30	2,389	30	79	39	77	30	101	30	26	4	2	.....	..
April, 1874.....	31	3,805	30	122	45	77	15	334	45	14	17	13	6	..
May, 1874.....	32	2,592	10	81	00	65	15	128	00	10	22	22	1	..
June, 1874.....	30	1,981	45	66	03	65	15	89	15	29	1	1	.....	..
July, 1874.....	31	2,101	25	67	47	65	15	89	45	27	4	3	.....	..
August, 1874.....	31	2,127	20	68	37	65	00	89	45	27	4	4	.....	..
September, 1874.....	30	1,999	30	66	39	65	00	89	45	26	2	1	.....	..
Whole period...	366	28,875	15	78	48	65	00	334	45	285	81	60	10	4

\* Mails ordered via Grand Junction, Tenn., November 19, 1873.

14.—Through mails to Washington from New Orleans.

ROUTE.—From New Orleans, La., via Mobile, Ala., Montgomery, Ala., Calera, Ala., (till May 20 1874 and thence, after passing Montgomery, Ala., via Atlanta, Ga.,) Dalton, Ga., Cleveland, Tenn., Knoxville, Tenn., Bristol, Tenn., and Lynchburgh, Va., to Washington, D. C.—1,188 miles, (1,216 miles via Atlanta, Ga.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	2,072	25	66	51	62	45	98	10	23	8	7	.....	..
November 1873*.....	30	2,222	00	74	04	60	00	98	10	4	26	28	.....	..
December, 1873.....	31	2,028	00	65	25	60	00	84	00	24	7	7	.....	..
January, 1874.....	31	2,134	45	68	51	60	00	108	00	17	14	14	1	..
February, 1874.....	28	1,916	20	68	26	60	00	99	30	16	12	12	.....	..
March, 1874.....	30	2,253	15	75	06	60	00	124	30	12	18	18	.....	..
April, 1874.....	31	2,819	50	90	57	73	45	147	15	15	16	16	1	..
May, 1874.....	31	2,586	40	83	26	61	00	100	30	6	25	23	2	..
June, 1874.....	30	1,980	10	66	00	63	00	88	00	25	5	2	.....	..
July, 1874.....	31	2,001	50	64	34	63	15	87	40	30	1	1	.....	..
August, 1874.....	31	1,975	45	63	44	63	10	69	00	29	2	.....	.....	..
September, 1874.....	30	1,944	25	64	48	63	15	87	15	27	3	1	.....	..
Whole period...	365	25,935	25	71	03	60	00	147	15	228	137	127	4	5

\* Mails ordered via Charlotte, N. C., November 19, 1873.



15.—Through mails to New Orleans from New York.

SOUTHWESTERN ROUTE.—From New York, N. Y., via Washington, D. C., Lynchburgh, Va., Bristol, Tenn., Knoxville, Tenn., Cleveland, Tenn., Dalton, Ga., (till May 11, 1874, and thence, after passing Dalton, via Atlanta, Ga.,) Calera, Ala., Montgomery, Ala., and Mobile, Ala., to New Orleans, La.—1,418 miles, (1,446 miles via Atlanta, Ga.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	2,532	00	81	40	79	00	103	15	28	3	3	.....	3
November, 1873*.....	30	2,540	05	84	40	79	00	115	15	26	4	3	.....	2
December, 1873.....	31	2,753	45	88	49	86	15	110	30	27	4	3	.....	3
January, 1874.....	31	2,925	35	94	22	86	15	158	30	19	12	6	.....	5
February, 1874.....	28	2,696	45	96	18	86	15	184	45	20	8	4	3	3
March, 1874.....	30	2,683	30	89	27	86	30	110	30	25	5	3	.....	4
April, 1874.....	31	4,054	30	130	47	86	15	343	45	14	17	13	6	9
May, 1874.....	32	2,881	25	90	02	74	15	137	00	10	22	22	.....	4
June, 1874.....	30	2,301	00	76	42	74	15	98	15	27	3	3	.....	2
July, 1874.....	31	2,356	35	76	01	74	15	98	45	28	3	2	.....	3
August, 1874.....	31	2,358	30	76	04	74	00	98	45	29	2	2	.....	4
September, 1874.....	30	2,318	55	77	17	74	15	98	55	26	4	3	.....	6
Whole period...	366	32,402	35	88	32	74	00	343	45	279	87	67	9	48

\* Mails ordered via Grand Junction, Tenn., November 19, 1873.

WESTERN ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., Columbus, Ohio, Cincinnati, Ohio, Louisville, Ky., Bowling Green, Ky., Humboldt, Tenn., Grand Junction, Tenn., and Canton, Miss., to New Orleans, La.—1,608 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	26	2,029	45	78	04	73	15	110	30	19	7	6	.....	8
November, 1873.....	29	2,236	15	77	06	73	30	101	30	24	5	3	.....	4
December, 1873.....	30	2,381	05	79	22	74	15	98	30	21	9	9	.....	5
January, 1874.....	32	2,550	20	79	41	74	15	100	00	21	11	10	.....	4
February, 1874.....	28	2,315	40	82	42	74	15	172	00	18	10	7	1	5
March, 1874.....	31	2,448	40	78	59	74	15	111	20	25	6	5	.....	5
April, 1874.....	28	2,686	50	95	57	74	15	233	30	13	15	13	1	6
May, 1874.....	32	2,753	15	86	02	76	00	149	00	24	8	8	.....	5
June, 1874.....	29	2,512	15	86	37	73	30	148	15	17	12	12	2	5
July, 1874.....	31	2,468	55	79	38	71	20	111	00	21	10	10	.....	5
August, 1874.....	32	2,618	50	81	50	71	00	157	45	21	11	11	1	4
September, 1874.....	30	2,322	10	77	22	71	15	98	30	20	10	10	.....	3
Whole period...	358	29,324	00	81	54	71	00	233	30	244	114	104	5	59

## 16.—Through mails to New York from New Orleans.

SOUTHWESTERN ROUTE.—From New Orleans, La., via Mobile, Ala., Montgomery, Ala., Calera, Ala. (till May 20, 1874, and thence, after passing Montgomery, via Atlanta, Ga.) Dalton, Ga., Cleveland, Tenn., Knoxville, Tenn., Bristol, Tenn., Lynchburgh, Va., and Washington, D. C., to New York, N. Y.—1,411 miles, (1,446 miles via Atlanta, Ga.)

## TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	30	2,282	20	76	04	72	25	110	00	25	5	5	.....	4
November, 1873* ....	29	2,472	30	85	15	72	40	111	50	5	24	24	.....	3
December, 1873.....	33	2,658	10	80	33	72	45	110	15	18	15	15	.....	6
January, 1874 .....	31	2,550	35	82	16	72	35	113	30	16	15	15	.....	16
February, 1874 .....	27	2,231	45	82	39	72	40	110	50	12	15	15	.....	9
March, 1874 .....	30	2,600	55	86	41	72	35	134	00	12	18	18	.....	2
April, 1874 .....	30	3,083	55	102	47	74	55	159	05	3	27	27	1	3
May, 1874 .....	32	3,176	50	99	16	72	30	120	50	6	26	26	.....	6
June, 1874 .....	31	2,374	00	76	34	72	30	101	00	24	7	7	.....	4
July, 1874 .....	31	2,374	00	76	34	73	30	97	50	25	6	6	.....	5
August, 1874 .....	30	2,342	00	78	04	73	30	87	00	20	10	10	.....	1
September, 1874.....	31	2,470	50	79	42	73	40	97	45	19	12	12	.....	3
Whole period ...	365	30,617	50	83	53	72	25	159	05	185	180	180	1	76

\* Mails ordered via Charlotte, N. C., November 19, 1873.

WESTERN ROUTE.—From New Orleans, La., via Canton, Miss., Grand Junction, Tenn., Humboldt, Tenn., Bowling Green, Ky., Louisville, Ky., Cincinnati, Ohio, Columbus, Ohio, Pittsburgh, Pa., and Harrisburgh, Pa., to New York, N. Y.—1,608 miles.

## TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	30	2,514	20	83	48	75	35	120	45	18	12	7	.....	4
November, 1873 .....	30	2,486	45	82	53	76	20	101	10	17	13	5	.....	4
December, 1873 .....	31	2,495	45	80	30	77	30	120	20	21	10	5	.....	1
January, 1874 .....	31	2,620	00	84	30	77	35	121	05	18	13	6	.....	1
February, 1874 .....	28	2,398	15	85	39	77	45	105	45	15	13	8	.....	1
March, 1874 .....	31	2,556	40	82	28	78	20	120	40	21	10	3	.....	1
April, 1874 .....	28	2,755	00	98	23	78	20	145	10	9	19	18	3	1
May, 1874 .....	31	2,891	30	96	11	82	45	119	40	10	21	21	.....	1
June, 1874 .....	31	2,819	05	90	56	83	30	111	00	17	14	14	.....	1
July, 1874 .....	30	2,582	40	86	05	70	55	119	30	12	18	18	.....	1
August, 1874 .....	31	2,454	25	79	10	75	00	96	40	21	10	2	.....	1
September, 1874.....	30	2,273	10	75	43	73	20	77	25	30	.....	.....	.....	1
Whole period ...	362	30,847	35	85	12	70	55	145	10	209	153	107	3	27

17.—Through mails to Memphis from New York.

SOUTHWESTERN ROUTE.—From New York, N. Y., via Washington, D. C., Lynchburgh, Va., Bristol, Tenn., Knoxville, Tenn., Chattanooga, Tenn., and Grand Junction, Tenn., to Memphis, Tenn.—1,165 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	1,950	30	62	55	62	00	86	00	29	2	1	.....	1
November, 1873.....	30	1,884	00	62	48	62	00	86	00	29	1	1	.....	1
December, 1873.....	31	1,960	25	63	14	62	00	73	30	30	1	1	.....	.....
January, 1874.....	31	2,133	25	68	49	63	05	135	05	25	6	4	.....	4
February, 1874.....	28	1,864	35	73	44	63	05	118	30	24	4	2	.....	2
March, 1874.....	31	2,044	55	65	57	63	05	90	00	27	4	3	.....	2
April, 1874.....	30	1,990	15	66	20	63	05	114	20	26	4	2	.....	2
May, 1874.....	31	1,998	35	64	28	64	15	69	00	30	1	.....	.....	.....
June, 1874.....	30	1,949	50	64	59	64	15	88	15	29	1	1	.....	1
July, 1874.....	31	1,969	00	63	30	62	30	64	15	31	.....	.....	.....	.....
August, 1874.....	31	1,969	00	64	09	62	30	86	30	29	2	2	.....	2
September, 1874....	30	1,941	05	64	42	61	35	86	35	27	3	3	.....	3
Whole period...	365	23,675	35	64	51	61	35	135	05	336	29	20	.....	18

WESTERN ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., Columbus, Ohio, Cincinnati, Ohio, Louisville, Ky., Bowling Green, Ky., and Humboldt, Tenn., to Memphis, Tenn.—1,249 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	54	3,298	30	61	05	54	00	76	30	53	1	1	.....	.....
November, 1873.....	55	3,279	25	59	37	54	00	70	00	55	.....	.....	.....	.....
December, 1873.....	56	3,204	50	57	13	54	30	70	40	51	5	3	.....	.....
January, 1874.....	57	3,372	40	59	10	55	10	79	10	55	2	2	.....	.....
February, 1874.....	51	2,988	30	58	35	54	20	70	30	47	4	.....	.....	.....
March, 1874.....	55	3,233	55	58	47	53	30	73	00	50	5	1	.....	.....
April, 1874.....	55	3,599	25	65	37	54	20	104	30	31	24	24	.....	1
May, 1874.....	58	3,606	50	62	11	54	20	76	15	44	14	14	.....	.....
June, 1874.....	54	3,183	20	58	57	52	15	68	45	54	.....	.....	.....	1
July, 1874.....	58	3,372	50	58	09	53	05	90	00	53	5	5	.....	1
August, 1874.....	57	3,248	45	56	59	53	05	77	05	55	2	2	.....	.....
September, 1874.....	54	3,034	50	56	12	53	05	68	35	53	1	1	.....	.....
Whole period...	664	39,423	50	59	22	52	15	104	30	601	63	53	.....	3

18.—Through mails to New York from Memphis.

SOUTHWESTERN ROUTE.—From Memphis, Tenn., via Grand Junction, Tenn., Chattanooga, Tenn., Knoxville, Tenn., Bristol, Tenn., Lynchburgh, Va., and Washington, D. C., to New York, N. Y.—1,111 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail was sent.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	58	3,881	40	67	55	60	50	85	35	56	8	1	.....	..
November, 1873.....	32	2,254	05	70	26	68	00	93	50	22	4	2	.....	..
December, 1873.....	31	2,155	35	69	32	68	00	92	20	36	1	1	.....	..
January, 1874.....	31	2,230	25	71	56	68	15	93	45	28	5	3	.....	..
February, 1874.....	28	2,014	50	71	57	67	35	95	30	23	6	3	.....	..
March, 1874.....	31	2,243	40	72	22	68	10	94	15	27	4	4	.....	..
April, 1874.....	30	2,172	15	72	24	67	20	115	20	25	5	3	1	.....
May, 1874.....	53	3,720	55	70	12	67	40	91	45	56	3	2	.....	..
June, 1874.....	51	3,595	45	70	30	67	40	108	45	43	2	7	.....	..
July, 1874.....	52	3,695	10	71	03	67	40	84	50	46	6	5	.....	..
August, 1874.....	49	3,521	45	71	52	68	00	85	00	41	8	8	.....	..
September, 1874.....	50	3,685	45	73	42	68	10	95	45	35	15	12	.....	..
Whole period ...	496	35,171	50	70	54	60	50	115	20	423	73	57	3	..

WESTERN ROUTE.—From Memphis, Tenn., via Humboldt, Tenn., Bowling Green, Ky., Louisville, Ky., Cincinnati, Ohio, Columbus, Ohio, Pittsburgh, Pa., and Harrisburgh, Pa., to New York, N. Y.—2,111 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail was sent.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	1,884	50	60	49	52	00	91	45	16	15	14	.....	..
November, 1873.....	30	1,771	10	59	02	52	35	71	45	15	15	12	.....	..
December, 1873.....	48	2,941	35	61	16	54	25	97	50	31	17	12	.....	..
January, 1874.....	55	3,308	00	60	08	54	30	79	05	33	22	17	.....	..
February, 1874.....	52	3,232	50	62	10	54	30	90	40	30	22	19	.....	..
March, 1874.....	56	3,378	40	60	20	54	25	99	40	37	19	17	.....	..
April, 1874.....	44	2,870	15	65	13	54	20	99	35	25	19	19	1	.....
May, 1874.....	31	1,875	40	60	30	54	15	89	15	19	12	12	.....	..
June, 1874.....	34	1,925	05	56	37	53	30	75	05	30	4	4	.....	..
July, 1874.....	50	2,841	00	56	49	51	40	70	10	42	8	6	.....	..
August, 1874.....	57	3,250	15	57	01	54	25	75	50	50	7	5	.....	..
September, 1874.....	56	3,105	00	55	26	51	15	63	30	55	1	.....	.....	..
Whole period ...	544	32,384	20	59	31	51	15	99	40	363	161	137	1	..

19.—Through mails to Cincinnati from Washington.

ROUTE.—From Washington, D. C., via Cumberland, Md., Grafton, W. Va., and Parkersburgh, W. Va., to Cincinnati, Ohio—612 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		A.	M.	A.	M.	A.	M.	A.	M.					
October, 1873 .....	54	1,390	45	25	45	22	45	43	45	50	4	2	.....	1
November, 1873 .....	44	1,123	15	25	31	22	50	47	10	40	4	2	.....	1
December, 1873 .....	45	1,118	15	24	51	22	50	37	30	41	4	1	.....	.....
January, 1874 .....	43	1,104	55	25	41	22	50	40	15	37	6	3	.....	4
February, 1874 .....	39	996	50	25	33	22	50	37	30	33	6	1	.....	.....
March, 1874 .....	32	781	55	24	26	23	30	29	00	29	3	.....	.....	1
April, 1874 .....	30	725	55	24	11	23	30	32	30	28	2	.....	.....	.....
May, 1874 .....	50	1,134	10	22	41	21	45	29	15	49	1	.....	.....	1
June, 1874 .....	54	1,194	50	22	07	21	55	25	15	54	.....	.....	.....	.....
July, 1874 .....	57	1,299	40	22	48	21	40	41	30	54	3	1	.....	1
August, 1874 .....	56	1,252	10	22	21	21	40	29	30	55	1	.....	.....	.....
September, 1874 .....	56	1,269	20	22	40	21	40	28	20	55	1	.....	.....	.....
Whole period...	560	13,392	50	23	54	21	40	47	10	525	35	10	.....	9

20.—Through mails to Washington from Cincinnati.

ROUTE.—From Cincinnati, Ohio, via Parkersburgh, W. Va., Grafton, W. Va., and Cumberland, Md., to Washington, D. C.—612 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		A.	M.	A.	M.	A.	M.	A.	M.					
October, 1873 .....	83	2,042	25	24	36	21	50	33	55	74	9	2	.....	.....
November, 1873 .....	74	2,005	05	27	05	22	10	59	15	68	6	3	.....	.....
December, 1873 .....	79	2,177	25	27	33	24	00	70	00	69	11	4	1	.....
January, 1874 .....	81	2,370	15	29	15	20	20	59	15	60	21	9	2	.....
February, 1874 .....	73	1,961	40	26	52	23	45	39	30	65	8	3	.....	.....
March, 1874 .....	88	2,312	05	26	16	24	05	36	10	82	6	1	.....	.....
April, 1874 .....	86	2,292	40	26	39	24	05	49	15	80	6	3	.....	.....
May, 1874 .....	82	2,015	05	24	34	21	35	35	40	79	3	3	.....	.....
June, 1874 .....	61	1,379	30	22	36	21	35	34	05	58	3	2	.....	.....
July, 1874 .....	59	1,317	15	22	19	20	35	33	45	56	3	3	.....	.....
August, 1874 .....	59	1,327	20	22	29	21	15	28	10	57	2	.....	.....	.....
September, 1874 .....	57	1,270	50	22	17	21	15	26	05	57	.....	.....	.....	.....
Whole period...	882	22,471	35	25	28	20	20	70	00	804	78	33	3	3

21.—Through mails to Cincinnati from New York.

ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., Steubenville, Ohio, Columbus, Ohio, and Xenia, Ohio, to Cincinnati, Ohio—744 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	82	2,841	05	34	38	28	50	69	00	51	31	8		2
November, 1873.....	71	2,444	50	34	26	29	50	51	00	64	7	3		3
December, 1873.....	75	2,579	40	34	23	29	55	62	25	65	10	9		2
January, 1874.....	82	2,763	00	33	41	26	25	58	30	63	19	11		2
February, 1874.....	72	2,330	25	32	22	29	55	43	30	67	5	2		
March, 1874.....	81	2,606	20	32	10	26	15	57	50	77	4	2		1
April, 1874.....	76	2,400	15	31	34	29	55	37	30	71	5			
May, 1874.....	80	2,531	55	31	38	29	55	37	00	80				
June, 1874.....	74	2,287	50	30	55	29	00	44	20	70	4	1		1
July, 1874.....	82	2,542	00	31	00	29	30	52	30	79	3	1		
August, 1874.....	81	2,510	50	30	59	29	05	40	30	78	3			
September, 1874.....	76	2,374	20	31	14	29	30	39	20	72	4			
Whole period..	932	30,212	30	32	25	26	15	69	00	837	95	37	11	1

22.—Through mails to New York from Cincinnati.

ROUTE.—From Cincinnati, Ohio, via Xenia, Ohio, Columbus, Ohio, Steubenville, Ohio, Pittsburgh, Pa. and Harrisburgh, Pa., to New York, N. Y.—744 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	79	2,569	20	32	31	29	05	46	15	77	2	1		
November, 1873.....	79	2,624	50	33	13	30	30	55	15	71	2	4		2
December, 1873.....	78	2,707	00	34	42	29	30	65	50	63	15	8		1
January, 1874*.....	29	985	80	33	58	29	45	46	10	21	8	3		
February, 1874.....	74	2,419	40	32	41	28	10	48	55	67	7	5		1
March, 1874.....	87	2,829	15	32	31	30	20	42	40	81	6	2		
April, 1874.....	84	2,766	50	32	56	30	20	50	00	78	6	6		
May, 1874.....	85	2,703	05	31	48	28	20	34	35	85				
June, 1874.....	78	2,389	30	30	38	24	50	43	35	72	6	1		
July, 1874.....	79	2,449	55	31	00	24	15	44	45	70	9	6		
August, 1874.....	77	2,349	40	30	30	24	30	44	45	74	3	2		1
September, 1874.....	75	2,275	05	30	20	22	10	37	35	67	8			
Whole period..	904	29,069	40	32	09	22	10	65	50	826	78	28	5	

\* No post-bills received at New York from Cincinnati from January 10 to 29, inclusive.



23.—Through mails to Saint Louis from Washington.

ROUTE.—From Washington, via Cumberland, Md., Grafton, W. Va., Parkersburgh, W. Va., and Cincinnati, Ohio, to Saint Louis, Mo.—954 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h.	m.	h.	m.	h.	m.	h.	m.					
October, 1873.....	57	2,424	40	42	32	37	20	63	45	39	18	3	.....	1
November, 1873.....	47	2,153	45	45	49	38	00	61	15	17	30	25	2	1
December, 1873.....	38	1,657	40	43	37	36	30	66	15	22	16	16	1	2
January, 1874.....	46	2,134	10	46	23	34	30	75	30	18	28	28	.....	2
February, 1874.....	39	1,869	20	47	55	36	45	73	15	10	25	29	.....	3
March, 1874.....	32	1,295	25	40	28	36	30	61	20	25	7	7	.....	1
April, 1874.....	30	1,215	15	40	30	36	30	61	00	23	7	6	.....	1
May, 1874.....	51	1,968	05	38	35	33	40	50	05	45	6	4	.....	.....
June, 1874.....	53	2,003	20	37	47	36	40	47	40	50	3	1	.....	.....
July, 1874.....	57	2,195	55	38	31	34	00	50	00	46	11	4	1	.....
August, 1874.....	55	2,102	30	38	13	35	00	59	35	48	7	5	1	.....
September, 1874.....	56	2,173	35	38	48	35	15	54	00	49	7	4	1	.....
Whole period ...	561	25,193	40	44	52	23	40	75	30	392	169	132	6	13

24.—Through mails to Washington from Saint Louis.

ROUTE.—From Saint Louis, Mo., via Cincinnati, Ohio, Parkersburgh, W. Va., Grafton, W. Va., and Cumberland, Md., to Washington, D. C.—954 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		h.	m.	h.	m.	h.	m.	h.	m.					
October, 1873.....	50	2,039	00	40	46	37	25	50	15	34	16	3	.....	.....
November, 1873.....	50	2,153	15	43	03	38	40	74	45	37	13	9	.....	.....
December, 1873.....	49	2,084	00	42	31	39	10	59	25	40	9	7	.....	1
January, 1874.....	58	2,558	30	44	06	39	05	66	15	36	20	9	.....	1
February, 1874.....	51	2,093	00	41	02	36	45	57	15	44	7	2	.....	.....
March, 1874.....	57	2,316	55	40	38	39	45	54	45	53	4	1	.....	.....
April, 1874.....	50	2,075	35	41	30	39	45	60	30	42	8	3	.....	1
May, 1874.....	53	2,090	40	39	26	36	10	50	45	46	7	7	.....	2
June, 1874.....	58	2,178	15	37	33	35	55	49	25	55	3	3	.....	.....
July, 1874.....	52	2,015	35	38	45	35	30	49	35	44	6	8	.....	3
August, 1874.....	60	2,326	40	38	46	35	55	53	45	52	8	6	.....	1
September, 1874.....	57	2,234	35	39	12	36	05	73	10	51	6	6	2	.....
Whole period ...	645	26,165	30	40	34	35	30	74	45	536	109	64	2	9

25.—Through mails to Saint Louis from New York.

ROUTE.—From New York, N. Y., via Harrisburgh, Pa., Pittsburgh, Pa., Steubenville, Ohio, Columbus, Ohio, Indianapolis, Ind., Terre Haute, Ind., and Mattoon, Ill., (also, after passing Terre Haute, via Vandalia, Ill.,) to Saint Louis, Mo.—1,074 miles, (1,050 miles via Vandalia.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	85	4, 220	20	49	39	43	15	86	00	55	30	9	5	.....
November, 1873 .....	74	3, 612	35	46	49	43	55	76	45	55	19	5	4	.....
December, 1873 .....	76	3, 783	00	49	46	44	15	76	45	51	23	11	7	.....
January, 1874 .....	82	4, 073	40	49	40	43	30	86	00	59	23	10	7	.....
February, 1874 .....	74	3, 508	35	47	24	44	15	67	30	61	13	4	.....	.....
March, 1874 .....	81	3, 961	05	48	54	44	15	68	15	58	23	10	7	.....
April, 1874 .....	80	3, 754	35	46	55	43	30	62	15	68	12	4	3	.....
May, 1874 .....	85	4, 032	55	47	40	44	05	85	50	71	14	7	5	.....
June, 1874 .....	75	3, 589	15	47	51	43	40	115	50	60	15	6	5	.....
July, 1874 .....	79	3, 712	10	46	59	43	35	71	30	69	10	4	5	.....
August, 1874 .....	83	3, 899	05	46	58	43	00	65	00	68	15	5	3	.....
September, 1874 .....	77	3, 553	35	46	09	43	30	65	00	70	7	3	.....	.....
Whole period ...	951	45, 701	10	48	03	43	00	115	50	745	206	78	4	.....

26.—Through mails to New York from Saint Louis.

ROUTE.—From Saint Louis, Mo., via Mattoon, Ill., (also via Vandalia, Ill.,) Terre Haute, Ind., Indianapolis, Ind., Columbus, Ohio, Steubenville, Ohio, Pittsburgh, Pa., and Harrisburgh, Pa., to New York, N. Y.—1,074 miles, (1,050 miles via Vandalia.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	54	2, 508	10	46	26	41	05	53	50	50	4	1	.....	.....
November, 1873 .....	42	1, 917	05	45	38	41	50	60	30	41	1	1	.....	.....
December, 1873.....	48	2, 309	30	48	06	42	00	73	35	44	4	1	.....	.....
January, 1874 .....	54	2, 569	55	47	35	42	15	60	20	46	8	1	.....	.....
February, 1874.....	52	2, 391	10	45	59	41	45	53	40	50	2	.....	.....	.....
March, 1874 .....	57	2, 644	15	46	23	42	10	73	00	55	2	1	1	.....
April, 1874 .....	50	2, 307	55	46	09	42	05	55	15	49	1	.....	.....	.....
May, 1874 .....	54	2, 490	25	46	07	42	00	50	20	54	.....	.....	.....	.....
June, 1874 .....	56	2, 396	25	42	47	39	40	67	00	49	7	3	.....	.....
July, 1874 .....	51	2, 121	05	41	35	37	00	51	30	43	8	1	.....	.....
August, 1874 .....	57	2, 418	30	42	25	40	00	60	00	45	12	2	.....	.....
September, 1874 .....	56	2, 351	40	41	59	37	40	51	15	46	10	2	.....	.....
Whole period ...	631	22, 426	05	45	02	37	00	73	35	572	59	13	3	.....

27.—Through mails to Chicago from Washington.

ROUTE.—From Washington, D. C., via Parkersburgh, W. Va., and Cincinnati, O., to Chicago, Ill.—873 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	31	1,520	10	49	21	46	30	61	30	.....	31	31	.....	4
November, 1873.....	36	1,484	00	41	13	36	45	59	30	26	10	6	.....	1
December, 1873.....	45	1,779	25	39	32	36	30	49	30	37	8	8	.....	
January, 1874.....	45	1,768	35	39	18	36	20	51	30	35	10	5	.....	
February, 1874.....	39	1,480	05	37	57	36	30	40	20	38	1	.....	.....	
March, 1874.....	32	1,218	55	38	05	36	30	41	40	28	4	.....	.....	
April, 1874.....	30	1,128	35	37	37	37	20	38	40	30	.....	.....	.....	
May, 1874.....	51	1,917	25	37	35	36	05	47	45	51	.....	.....	.....	
June, 1874.....	56	2,123	10	37	54	36	15	48	05	56	.....	.....	.....	
July, 1874.....	58	2,196	00	37	51	36	25	48	55	58	.....	.....	.....	
August, 1874.....	57	2,158	00	37	51	36	00	51	05	57	.....	.....	.....	
September, 1874.....	56	2,106	25	37	36	36	25	48	35	56	.....	.....	.....	
Whole period...	536	20,880	45	38	57	36	00	61	30	472	64	52	.....	5

28.—Through mails to Washington from Chicago.

ROUTE.—From Chicago, Ill., via Cincinnati, O., and Parkersburgh, W. Va., to Washington, D. C.—873 miles.

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	80	3,056	05	38	12	32	45	49	05	79	1	1	.....	
November, 1873.....	72	2,750	05	38	11	35	30	58	15	62	10	3	.....	
December, 1873.....	76	2,935	45	38	37	34	45	62	10	67	9	3	.....	1
January, 1874.....	81	3,148	15	38	52	35	45	62	10	65	16	2	.....	
February, 1874.....	70	2,616	10	37	22	33	00	45	30	64	6	.....	.....	
March, 1874.....	74	2,812	45	38	00	35	45	49	15	65	9	1	.....	1
April, 1874.....	78	2,886	00	37	00	35	45	45	30	75	3	.....	.....	
May, 1874.....	79	2,943	30	37	15	34	30	45	30	78	1	.....	.....	
June, 1874.....	72	2,741	45	38	04	35	40	50	30	62	10	3	.....	
July, 1874*.....	37	1,358	35	36	43	34	50	47	50	34	3	3	.....	
August, 1874*.....	3	120	15	40	05	35	00	49	15	2	1	1	.....	
September, 1874.....	71	2,601	20	36	38	34	50	49	10	68	3	3	.....	
Whole period...	793	29,970	30	37	48	32	45	62	10	721	72	20	7	2

\* Transmission of post-bill cards interrupted by fire at Chicago.

29.—Through mails to Chicago from New York.

ROUTE.—From New York, N. Y., via Harrisburgh, Pa., and Pittsburgh, Pa., (also from New York, N.Y. via Erie, Pa.,) to Chicago, Ill.—901 miles, (964 miles via Erie.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	85	3,115	10	36	38	35	00	42	00	82	3			
November, 1873.....	82	3,045	10	37	08	35	30	41	30	77	5			4
December, 1873.....	83	3,142	05	37	51	35	30	49	40	78	5	1		5
January, 1874.....	85	3,201	35	37	39	35	30	44	30	81	4			4
February, 1874.....	76	2,846	25	37	27	35	20	41	35	75	1			4
March, 1874.....	83	3,098	05	37	19	35	10	40	30	83				5
April, 1874.....	86	3,211	40	37	20	35	25	40	30	86				
May, 1874.....	85	3,164	10	37	13	34	50	40	15	85				4
June, 1874.....	80	2,945	35	36	49	34	40	46	25	79	1	1		3
July, 1874.....	85	3,115	10	36	38	34	40	39	30	85				4
August, 1874.....	84	3,075	45	36	36	34	30	39	25	84				4
September, 1874.....	81	2,960	25	36	32	34	35	39	30	81				5
Whole period...	995	36,921	15	37	06	34	30	49	40	976	19	2		4

30.—Through mails to New York from Chicago.

ROUTE.—From Chicago, Ill., via Pittsburgh, Pa., and Harrisburgh, Pa., (also from Chicago, Ill. via Erie, Pa.,) to New York, N. Y.—901 miles, (964 miles via Erie.)

TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	76	2,912	15	38	19	33	55	50	50	69	7	2		
November, 1873.....	70	2,727	45	38	58	32	05	56	30	59	11	2		1
December, 1873.....	69	2,701	50	39	09	35	05	63	40	60	9	1	1	
January, 1874.....	75	2,935	35	39	08	35	00	48	45	62	13	3	1	
February, 1874.....	69	2,639	55	38	15	34	55	47	00	64	5	2	1	
March, 1874.....	72	2,654	15	36	51	34	50	49	45	68	4	3		2
April, 1874.....	78	2,954	05	37	44	34	25	46	50	77	1	1		
May, 1874.....	77	2,904	50	37	43	34	45	40	15	77				2
June, 1874.....	72	2,727	20	37	52	34	20	47	00	68	4	1		
July, 1874*.....	41	1,540	20	37	34	34	30	50	30	38	3	1	1	
August, 1874*.....														
September, 1874.....	77	2,883	50	37	27	33	45	45	30	77				
Whole period...	776	29,582	00	38	07	32	05	63	40	719	57	16	4	6

\* Transmission of post-bill cards interrupted by fire at Chicago.

## 31.—Through mails to Chicago from Boston.

ROUTE.—From Boston, Mass., via Albany, N. Y., Buffalo, N. Y., Erie, Pa., and Toledo, Ohio, to Chicago, Ill.—1,042 miles.

## TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	81	3,685	05	45	29	39	15	02	30	80	1			
November, 1873.....	76	3,484	50	45	51	39	45	60	40	78				
December, 1873.....	53	2,263	25	42	42	40	10	52	30	53				
January, 1874.....	54	2,303	25	42	39	40	05	52	30	54				
February, 1874.....	46	2,042	35	42	33	37	15	56	35	48				
March, 1874.....	52	2,211	50	42	32	40	10	52	30	52				
April, 1874.....	52	2,240	40	42	19	40	10	53	50	52				
May, 1874.....	53	2,229	55	42	04	39	10	52	25	53				
June, 1874.....	51	2,129	05	41	44	39	00	51	55	51				
July, 1874.....	54	2,248	50	41	38	39	00	52	25	54				
August, 1874.....	53	2,231	55	42	06	39	25	52	15	53				
September, 1874.....	51	2,137	35	41	54	39	10	55	30	51				
Whole period...	678	29,169	10	43	01	37	15	62	30	677	1			

## 32.—Through mails to Boston from Chicago.

ROUTE.—From Chicago, Ill., via Toledo, Ohio, Erie, Pa., Buffalo, N. Y., and Albany, N. Y., to Boston, Mass.—1,042 miles.

## TIME IN TRANSIT.

Period.	Mails carried through.	Aggregate time occupied.		Average time.		Shortest time.		Longest time.		Mails in schedule time.	Mails behind schedule time.	Mails half a day or more behind time.	Mails behind others of later date.	Days on which no mail arrived.
		<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>	<i>h.</i>	<i>m.</i>					
October, 1873.....	80	3,390	15	42	22	39	00	57	00	80				
November, 1873.....	72	3,194	00	44	21	38	45	90	30	70	2	2	2	
December, 1873.....	74	3,286	40	44	24	39	00	70	00	73	1	1	1	1
January, 1874.....	79	3,461	35	43	49	37	20	86	55	77	2	2	2	
February, 1874.....	72	3,142	55	43	39	38	15	55	50	71	1			
March, 1874.....	75	3,240	50	43	12	38	15	68	30	73	2	2	2	
April, 1874.....	75	3,248	05	43	18	39	15	84	20	74	1	1	1	
May, 1874.....	79	3,415	40	43	14	39	15	72	20	75	4	4	2	
June, 1874.....	74	3,142	25	42	27	38	45	55	20	74				
July, 1874*.....	41	1,857	05	45	17	36	45	69	00	29	12	3	1	
August, 1874*.....														
September, 1874.....	77	3,275	20	42	32	38	45	68	00	75	2	2	1	1
Whole period...	798	34,654	50	43	25	37	20	90	30	771	27	17	12	2

\* Transmission of post-bill cards interrupted by fire at Chicago.

JOHN L. ROUTT,  
Second Assistant Postmaster-General.

## RAILWAY MAIL-SERVICE.

SIR: At the close of the fiscal year ending June 30, 1873, there were in operation fifty-nine lines of railway post-office cars, extending over 14,866 miles of railroad, on which was performed 34,925 miles of service daily, and 12,747,625 miles of service annually, by 752 railway post-office clerks. These clerks are classified as follows: 283 head clerks, 379 clerks, and 90 assistant clerks.

## CHANGES DURING THE FISCAL YEAR ENDED JUNE 30, 1874.

*Lines established.*

Double daily service between Baltimore, Md., and Grafton, W. Va. 280 miles.

Daily service between Grafton, W. Va., and Columbus, Ohio, 233 miles.

Double daily service between Grafton, W. Va., and Cincinnati, Ohio, 309 miles.

In January, 1873, the Pennsylvania Central Railroad, New York Central and Hudson River Railroad, New York and Erie Railroad, and certain others, joined in a memorial to the Post-Office Department, giving therein certain rates of compensation for which alone they would furnish postal cars after a certain date therein named.

The Baltimore and Ohio Railroad had previously tendered the Department the full use of their lines, equipped in a manner satisfactory to it.

This was needed to perfect the communication between the Southeast and West and Northwest, and would have partially overcome any delays to the mails had the roads above mentioned put in force their threat.

For these reasons the offer of the Baltimore and Ohio Railroad was accepted and the above lines of railway post-offices established.

Daily service between Cincinnati, Ohio, and Chicago, Ill., 310 miles.

This completes a through line between Washington and Chicago, and forms a connection between the roads centering at Cincinnati, Indianapolis, and Chicago.

Daily service between Indianapolis, Ind., and Galesburgh, Ill., 264 miles.

This was necessitated by the lack of postal facilities upon the Pennsylvania railroad system.

In all five lines, extending over 1,396 miles of railroad, on which is performed 3,970 miles of service daily.

*Extensions, &c.*

The line between Boston, Mass., and South Berwick, Me., was extended to Portland, Me., 42 miles.

Bloomington, Ill., and Saint Louis, Mo., terminus changed to Mexico, Mo., increasing distance 20 miles.

Chicago, Ill., and Green Bay, Wis., changed to Chicago, Ill., and Fort Howard, Wis., without increase of distance. Sedalia, Mo., and Denison, Tex., extended to Hannibal, Mo., 143 miles.

These extensions cover 205 miles of railroad, on which is performed 410 miles of service daily.



The new line between Indianapolis, Ind., and Galesburgh, Ill., covers that portion of the line between Peoria, Ill., and Burlington, Iowa, between Peoria and Galesburgh, Ill., 53 miles, on which was performed 106 miles of service daily.

*Consolidated.*

The lines between Freeport and Bloomington, Ill., and Bloomington and Centralia, Ill., were consolidated into one line.

*Total increase.*

The increase in railway post-office lines is four.

In miles of railroad, 1,548.

In miles of daily service, 4,274.

In miles of annual service, 1,560,010.

*Increase in clerical force.*

During the year there was an increase of 98 railway post-office clerks, (5 head clerks, 86 clerks, and 7 assistant clerks,) with an annual compensation of \$117,200.

*Present condition of the railway post-office service.*

The railway post-office cars are now in operation on most of the important connecting and trunk lines of railroad, giving the most direct and available transit to the mails between the office of origin and destination, and forming nearly a perfect connection between the various railroads upon which service is performed by route agents.

The Pennsylvania Railroad system is, perhaps, the most extended and important in the country for mail transportation. It is now used to a great extent in the forwarding of through and direct mails, but owing to the poor postal-car facilities at present furnished by that road, it cannot be utilized to any great extent in the distribution of mails in transit.

As this company has expressed its willingness to grant improved accommodations, the benefit to be derived would fully warrant the Department in the acceptance of the same. The necessity of this addition to the postal-car lines can best be judged by the following statement of the bulk of mails passing between the East and West.

New York City originates 55 to 60 tons of mail-matter daily, as shown by their official statement; 45 to 50 tons of this is forwarded on the trunk lines leading to the West and Southwest. Three of these lines, the Pennsylvania Railroad, New York and Erie Railroad, and New York Central and Hudson River Railroad, carry daily over their whole length an average of 93,000 pounds of mail; and as the bulk of this mail is deposited in the offices at the latest hour possible to make the trains, or arrives on connecting trains, it must be distributed in transit, taxing the present accommodations to the utmost, especially as the Erie Railroad is the only one upon which the Department have such accommodations as are required.

The propriety of establishing a fast and exclusive mail-train between New York and Chicago has been discussed for some time, and there appears to be a growing necessity for the same; this train to be under the control of the Department, so far as it is

necessary for the purposes designed, and to run the distance in about 24 hours. It is conceded by railroad officials that this can be done.

The importance of a line like this cannot be overestimated. It would reduce the actual time of the mail between the East and West from 12 to 24 hours. As it would necessarily be established upon one or more of the trunk-lines, having an extended system of connections, its benefits would be in nowise confined, but extended to all parts of the country alike. It would also, should this line be established, be practicable to reduce to one line daily, beside this through line, the service upon the three trunk lines to the West. This reduction would compensate for all the additional expense incurred by the fast mail-train, especially as by the operation of the law governing mail transportation the more mail concentrated upon a single line of railway the less is the aggregate cost of transportation per pound or ton per mile.

The line between Cincinnati and Louisville, via North Vernon, Ind., now established, completes a continuous service between Cincinnati and the railroads centering there and Nashville, Tenn.

#### THE WITHDRAWAL OF POSTAL CARS FROM THE PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD.

In the early part of 1874 the Philadelphia, Wilmington and Baltimore Railroad, over which the New York and Washington railway post-office passes, repeated its demand for increased compensation, and threatened, if it was not complied with, to withdraw the postal cars. The Department was powerless to grant this, as the road was already receiving the maximum compensation under the law regulating the same. Negotiations were entered into to prevent such procedure on the part of the railroad, with, however, no apparent success except to extend the time of such action from July 1 to August 1, 1874.

The company took this ground: It would not refuse the mails in the postal cars, and should they be tendered, it would consider it an acceptance of the terms proposed by them. As this position was clearly untenable, and if the mails were accepted and transported, it could be only upon the terms prescribed by Congress, the Department notified the company that this was their position, and tendered the mails in the postal cars, and they were transported as usual.

To avoid all delays possible, should the company take extreme measures and refuse to transport the mails in postal cars, arrangements were perfected with the Pennsylvania Railroad, so that the mails between Philadelphia, Baltimore, and Washington would have been carried with equal celerity as by the old route, and the only sufferers would have been the communities wholly dependent upon the Philadelphia, Wilmington and Baltimore Railroad and its branches for their mail supplies.

#### *The cause of this trouble.*

The cause of this difficulty was not so much in the amount of compensation as in the basis of the same. On the Philadelphia, Wilmington and Baltimore Railroad all the car-space can be utilized. Owing to the peculiar features as to the kind of mail and the connections of the road, a relatively much larger amount of space to weight carried is required than upon any other, and the result is that this road claims there is an inequality between its compensation and the compensation to other roads of the same class.

*The remedy.*

In this connection it would be advisable to recommend legislation placing the compensation to railroads on other bases than weight alone. When weight was first made the basis of compensation, mails were mostly carried in bulk, or the space required was relatively so small that it did not enter into consideration. But with the increasing railroad facilities and closer connections made at terminal points, came the necessity of distribution in transit, or else delay. Thus has space grown into primary importance, and the relations between the space required and weight carried are becoming so varied on different railroads, governed entirely by the country through which the railroad passes and its connections, that it works unequally, and is an increasing source of complaint upon the part of the railroads who furnish ample accommodations, and of embarrassment to the Department when railroads refuse to furnish the same.

The compensation should be so based that it would command the use of any or all trains run upon any railroad, and ample space for the proper working of the mails. It should be so flexible that mails could be changed from one road to another at the option of the Department, when demanded by a change of connections, &c. This the present law does not admit of. The labor and expense attached to a weighing prevents a frequent repetition. In case of a change of a heavy mail from one road to another, one road would carry what another was paid for, or two roads might be paid for carrying the same mail. Besides, the use of necessary trains is and can be refused, and the car-space furnished for the working of the mails can, and frequently is, so limited as to be almost useless. On no other one thing does the perfection of the railway mail-service, and, in fact, the whole postal service, depend than upon having every accommodation from the railroads that it is possible for them to extend.

*Harmony in the distribution and dispatch of mails.*

It is of vital importance that the whole distribution and dispatch of mails, in post-offices and upon railroads, be under one general supervision, as with this a harmony and uniformity is to be had, resulting in a maximum of result from a minimum of labor. This is now nominally the case throughout the country, and actually so in by far the greater part of it.

*Civil service.*

The civil service of this branch of the Department, established previous to the creation of the Civil-Service Commission, and continued as established with its consent, is thoroughly practical and wholly successful. It consists simply of a distribution of mail made at an examination case, similar in every respect to the one made on the cars, or in the post-office when on duty, and a record kept of the same. The improvement under this system is marked.

Each railway post-office clerk, route-agent, or post-office clerk, in making a distribution, is required to attach to each package of letters he makes up a facing or label-slip bearing the address of the package, the office or route upon which it was made up, with the name of the clerk making the distribution.

The clerk receiving and opening this package is required to note

upon these slips all errors of any kind, if any, and forward the slip to the superintendents of their respective divisions, where a record is kept of the work performed by each clerk.

Below are given the return of the slips made on the railway post-offices alone for the month of June, 1873 and 1874:

June, 1873:

Total slips returned, each representing a package of letters.....	144,323
Total number of errors found .....	9,047
Number packages of letters to each error .....	16
Number letters distributed right to each one wrong .....	79

June, 1874:

Total slips returned .....	325,624
Total errors found .....	10,771
Number packages of letters to each error .....	31
Number letters distributed right to each one wrong .....	1,500

A very marked improvement. In this manner a check is kept upon each clerk, and the poor, careless, or inefficient ones soon discovered and made to perform better work or make place for those that will. For it is useless to undertake to give the people what they demand, absolute certainty in their mail facilities, unless those who have the handling of the mails can be educated or controlled in some manner.

### *Re-organization.*

In 1871 the territory of the United States was divided into five divisions as follows:

**FIRST DIVISION.**—*Superintendent's headquarters, Boston, Mass.*—Territory: Maine, New Hampshire, Connecticut, Massachusetts, Rhode Island, and Vermont.

**SECOND DIVISION.**—*Superintendent's headquarters, New York.*—Territory: New York, New Jersey, Pennsylvania, Delaware, Maryland, Eastern Shore of Virginia, and Western Virginia.

**THIRD DIVISION.**—*Superintendent's headquarters, Chattanooga, Tenn.*—Territory: North Carolina, South Carolina, Georgia, Alabama, Tennessee, Kentucky, Mississippi, Louisiana, Texas, Florida, and Virginia, excluding the Eastern Shore.

**FOURTH DIVISION.**—*Superintendent's headquarters, Chicago, Ill.*—Territory: Illinois, Indiana, Iowa, Michigan, Missouri, Minnesota, Wisconsin, Kansas, Nebraska, New Mexico, Arkansas, Indian Territory, Dakota, Colorado, and Ohio.

**FIFTH DIVISION.**—*Superintendent's headquarters, San Francisco, Cal.*—Territory: California, Oregon, Idaho, Montana, Nevada, Utah, Washington, Arizona, and Wyoming.

To each of these divisions was assigned an assistant superintendent of railway mail-service, as superintendent of division.

To these superintendents was delegated the supervision of all the details of service in their respective divisions.

The great territorial extent and vast railroad mileage of some of these divisions made it almost impracticable for the respective superintendents to give all that close personal supervision necessary to make and maintain a perfect service. Many of the lines of railroad could not be visited at all, or else at wide intervals, and the same of the post-offices. In view of all this, the increasing mails, number of post-offices, and mileage of railroads, a reorganization seemed to be imperative, and was accordingly recommended to and made by the Postmaster-General, as shown in the following order:

POST-OFFICE DEPARTMENT,  
Washington, D. C., October 9, 1874

*Ordered,* That from and after this date the officers in charge of the railway mail-service shall consist of one general superintendent, one assistant superintendent, and eight superintendents, assigned to duty as hereinafter mentioned.

That the divisions of the railway mail-service shall be eight in number, each composed of the several States and Territories hereinafter stated. The superintendents

named in this order are assigned to duty in such divisions, with headquarters at the points mentioned. The general superintendent is directed to arrange all the details necessary to carry this order into effect and full force, subject to the approval of the Postmaster-General.

Office of General Superintendent of Railway Mail-Service, Washington, D. C., George S. Bangs, general superintendent.

M. V. Bailey, chief clerk, and in charge of third division.

T. N. Vail, assistant superintendent railway mail-service, in charge of schemes for general distribution, statistics, &c.

First division—comprising the New England States. Thomas P. Cheney, superintendent, Boston, Mass.

Second division—comprising New York, New Jersey, Pennsylvania, Delaware, and the Eastern Shore of Maryland. Roswell Hart, superintendent, New York, N. Y.

Third division—comprising Maryland, (excluding the Eastern Shore,) Virginia, West Virginia, and the District of Columbia. M. V. Bailey, superintendent, Washington, D. C.

Fourth division—comprising North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana. L. M. Terrell, superintendent, Atlanta, Ga.

Fifth division—comprising Ohio, Indiana, Kentucky, and Tennessee. C. Jay French, superintendent, Cincinnati, Ohio.

Sixth division—comprising Michigan, Wisconsin, Illinois, Iowa, Nebraska, Minnesota, and the Territories of Dakota and Wyoming. James E. White, superintendent, Chicago, Ill.

Seventh division—comprising Missouri, Kansas, Arkansas, Texas, and the Territories of Colorado, Indian, and New Mexico. W. L. Hunt, superintendent, Saint Louis, Mo.

Eighth division—comprising California, Nevada, Oregon, and the Territories of Alaska, Arizona, Idaho, Montana, Utah, and Washington. I. A. Amerman, superintendent, San Francisco, Cal.

MARSHALL JEWELL,  
*Postmaster-General.*

#### COST OF THE RAILWAY POST-OFFICE SERVICE.

The additional compensation given to the railroads for furnishing and transporting railway post-office cars is, as nearly as can be estimated, \$600,000 annually. The compensation of clerks performing this service is \$1,058,200 annually. The cost of superintendency, for salary and per diem, is \$34,420. A total cost of \$1,692,620.

That this cost is apparent, however, and not real, will be seen in the following:

The railway post-offices, with three or four exceptions, perform the way or local service, that is, supply the offices along the line of railroad over which they pass. A careful estimate shows that to do this work would alone require 370 clerks or route-agents, which would cost, at \$1,000 each per year, (the average salary given on that class of routes,) \$370,000.

Again, were not this distribution made on the cars, it would necessitate the establishment of at least 50 additional distributing post-offices, employing from one additional clerk in the smallest to 75 in the largest. This latter is the estimate for Chicago.

That it would require a larger force in the offices than on the cars to make the distribution of the same amount of mail is evident from the following reason:

On the cars they have the whole time in transit, while in the post-office the distribution must be made in the shortest possible time, requiring larger force, in order that it may be forwarded by the first departing trains after its arrival. This must at least offset the balance of compensation to clerks. The additional space required in the post-offices would alone aggregate to no inconsiderable item.

The new superintendency would be necessary under any system, as the distribution and dispatch of mails would require the same general supervision as now to secure the best possible results. Not the least considera-

tion in favor of the railway post-office is the avoidance of delays resulting from any other system than the distribution of mails in transit.

These have all been set forth at length in the letter of the Postmaster-General in answer to a Senate resolution of inquiry. (Ex. Doc. No. 37, 43d Congress, 1st session.)

In closing, it is due to the railway post-office clerks and route-agents employed on railways throughout the country, that the faithfulness with which they have performed their arduous and at times perilous duties be commended. This hearty co-operation on their part is reflected by the efficiency of the mail-service in all sections of the Union.

Very respectfully,

GEO. S. BANGS,  
*General Superintendent.*

Hon. J. L. ROUTT,  
*Second Assistant Postmaster-General.*



# STATEMENTS SHOWING OPERATIONS AND RESULTS OF FOREIGN-MAIL SERVICE FOR THE FISCAL YEAR ENDED JUNE 30, 1874.

The postages on United States and European mails were as follows :

The aggregate amount of postage (sea, inland, and foreign) on the mails exchanged—

With the United Kingdom.....	\$794,630 45
With Germany.....	399,811 87
With France.....	16,125 90
With Belgium.....	13,992 39
With the Netherlands.....	22,129 48
With Italy.....	44,947 55
With Switzerland.....	38,863 75
With Denmark.....	20,543 38
With Norway.....	34,614 75
With Sweden.....	53,141 13

Total postages .....\$1,438,800 65

Being an increase of \$32,293.15 over the amount reported for the previous year.

The postages on mails *sent* to Europe were as follows, viz :

To the United Kingdom.....	\$426,530 05
To Germany.....	213,259 95
To France.....	6,467 20
To Belgium.....	6,540 62
To the Netherlands.....	11,488 98
To Italy.....	19,846 24
To Switzerland.....	18,711 28
To Denmark.....	10,063 28
To Norway.....	17,797 67
To Sweden.....	25,139 13

Total .....\$755,844 40

The postages on mails *received* from Europe were as follows, viz :

From the United Kingdom.....	\$368,100 40
From Germany.....	186,551 92
From France.....	9,658 70
From Belgium.....	7,451 77
From the Netherlands.....	10,640 50
From Italy.....	25,101 31
From Switzerland.....	20,152 47
From Denmark.....	10,480 10
From Norway.....	16,817 08
From Sweden.....	28,002 00

Total .....\$682,956 25

Postages collected in the United States.....	\$869,964 85
Postages collected in Europe.....	568,835 80

Excess of collections in the United States.....\$301,129 05

Number of letters (single rates) <i>sent</i> from the United States.....	10,556,836
Number of letters (single rates) <i>received</i> from Europe.....	9,410,206

Total.....19,967,042

Being an increase of 381,528 over the number reported for the previous year.

The excess of postages on mails *sent* from the United States to different countries of Europe, over that on mails *received* from the same countries, was as follows:

United Kingdom.....	\$58,429 65
Germany.....	26,708 03
Netherlands.....	842 45
Norway.....	950 50

Total..... \$86,966 75

The excess of postages on mails *received* over those on mails *sent* was as follows:

France.....	\$3,191 50
Belgium.....	911 15
Italy.....	5,255 07
Switzerland.....	1,441 19
Denmark.....	416 32
Sweden.....	2,862 57

Total..... \$14,078 60

*Number of letters and amounts of postage on mails conveyed to and from Europe by the respective steamship-lines.*

Name of line.	Number of letters.			Amounts of postage on letter-mails.		
	Sent.	Received.	Total.	Sent.	Received.	Total.
Hamburg.....	2,475,802	1,258,337	3,734,139	\$183,827 67	\$97,524 95	\$281,352 62
North German Lloyd.....	2,199,971	2,525,315	4,725,286	168,898 42	188,800 53	357,697 95
Inman.....	74,736	2,273,972	2,348,708	4,725 73	162,612 24	167,337 97
White Star.....	1,647,568	16,922	1,664,490	108,266 53	1,102 40	109,368 93
Williams & Guion.....	2,346,928	66	2,346,994	163,262 39	3 34	163,265 73
Cunard.....	1,276,656	3,244,346	4,521,002	88,927 50	224,434 99	313,362 49
Eagle.....	210,236	13,836	224,072	16,751 77	1,056 24	17,807 01
Canadian.....	282,612	1,806	284,418	17,567 94	109 40	17,677 34
Red Star.....	490	3,701	4,191	28 40	228 42	256 82
Netherlands, American St. Nav. Co.....	574	2,613	3,187	34 44	165 59	200 03
American Steamship Co.....	15,528	330	15,858	994 96	26 32	1,021 28
General Transatlantic.....	25,404	68,611	94,015	2,540 40	6,861 10	9,401 50
Baltic Lloyd.....	331	334	665	20 25	28 94	49 19
National Line.....		17	17		1 74	1 74
Total.....	10,556,836	9,410,206	19,967,042	755,844 40	682,956 25	1,438,800 65
Increase over 1873.....	283,125	98,403	381,528	41,133 36		41,133 36
Decrease.....					8,840 21	8,840 21

*Payments during fiscal year ended June 30, 1874, to ocean-steamship lines transporting mails for the sea-postages as compensation for the service.*

Hamburg line.....	\$52,927 65
North German Lloyd line.....	41,424 12
Inman line.....	1,518 73
White Star line.....	40,709 45
Williams & Guion line.....	58,276 43
Cunard line.....	29,521 77
Eagle line.....	3,868 12
Canadian line.....	6,731 57
Red Star line.....	17 74
Netherlands, American Steam Navigation Company.....	13 61
American Steamship Company's line.....	701 17

235,373 51

To Pacific Mail Steamship Company.....	\$26,356 50
To West Indies, Mexico, Brazil, Bermuda, New Granada, and New Zealand.....	68,855 02
To Nova Scotia.....	1,759 59

96,971 11

Total..... \$332,344 62

have concluded from a comparison.

Countries.	LETTER-MAILS.				PRINTED MATTER AND SAMPLES.				Total. Grams.      Ounces.
	From the United States.		To the United States.		From the United States.		To the United States.		
	Grams.	Ounces.	Grams.	Ounces.	Grams.	Ounces.	Grams.	Ounces.	
United Kingdom.....	39,136,179	2,042,3984	94,073,815	1,822,6623	73,238,564	7,990,6184	97,594,025	11,338,6521	19,1
Germany.....	681,950		749,549		1,935,460		1,178,481		100,706,549
France.....	739,241		718,587		2,242,906		2,680,521		13,133,688
Belgium.....					1,458,128				4,983,327
Netherlands.....	1,092,947		902,076		1,904,323		1,714,797		3,670,497
Switzerland.....	1,760,335		1,578,163		6,937,480		3,302,480		9,635,940
Italy.....	1,641,797		1,513,308		4,828,753		2,909,612		7,098,365
Denmark.....	1,977,077		1,157,519		1,030,056		1,449,634		2,479,690
Sweden.....	2,377,039		1,583,849		1,771,531		973,734		2,745,290
Norway.....	1,579,266		1,122,521		1,346,568		468,915		1,889,503
Total grams and equivalent in ounces.....	40,984,431	1,452,850	33,388,717	1,179,680	73,694,148	8,602,530	104,600,912	12,694,513	5,167,791
Total.....	3,465,446		3,002,348		6,407,795		11,685,126		24,497,055
Increase over 1873.....	79,521		30,787		110,362		677,696		1,646,119

*Number of letters and newspapers and amounts of United States postage (so far as reported) on mails exchanged with Canada, the West Indies, &c.*

Country.	Number of letters.	Number of newspapers.	United States postage.
British provinces.....	7, 034, 390	1, 744, 276	\$227, 095 64
West India Islands.....	876, 441	328, 577	95, 615 57
Panama and Central America.....	207, 356	226, 022	31, 632 49
China and Japan.....	224, 354	313, 763	31, 205 36
Brazil.....	96, 031	82, 424	16, 317 34
Sandwich Islands, New Zealand, and Australia.....	72, 220	100, 522	6, 095 49
Mexico.....	51, 922	59, 602	5, 055 01
Ecuador.....	6, 214	7, 319	1, 359 12
New Granada.....	15, 120	5, 984	1, 630 38
Venezuela.....	5, 427	2, 459	529 55
Total.....	8, 589, 475	2, 870, 948	\$416, 026 11

POSTAL CONVENTION BETWEEN THE UNITED STATES OF AMERICA AND  
THE COLONIAL GOVERNMENT OF NEW SOUTH WALES.

The undersigned, being thereunto duly authorized by their respective governments, have agreed upon the following articles, establishing and regulating the exchange of correspondence between the United States of America and the colony of New South Wales.

## ARTICLE 1.

There shall be an exchange of correspondence between the United States of America and New South Wales, by means of the direct line of colonial mail-packets plying between San Francisco and said colony, as well as by such other means of direct mail-steamship transportation between the United States and New South Wales as shall hereafter be established, with the approval of the respective Post Departments of the two countries, comprising letters, newspapers, printed matter of every kind, and patterns and samples of merchandise, originating in either country, and addressed to and deliverable in the other country, as well as correspondence in closed mails originating in New South Wales and destined for foreign countries by way of the United States.

## ARTICLE 2.

The post-office of San Francisco shall be the United States office of exchange, and Sydney the office of exchange of the colony of New South Wales, for all mails transmitted under this arrangement.

## ARTICLE 3.

No accounts shall be kept between the Post Departments of the two countries upon the international correspondence, written or printed, exchanged between them, but each country shall retain to its own use the postages which it collects.

The single rate of international letter-postage shall be twelve cents in the United States, and sixpence in New South Wales, on each letter weighing half an ounce or less, and an additional rate of twelve cents (sixpence) for each additional weight of half an ounce or fraction thereof, which shall, in all cases, be prepaid at least one single rate, by means of postage-stamps, at the office of the mailing in either country. Letters unpaid or prepaid less than one full rate of postage shall not be forwarded, but insufficiently-paid letters, on which a single rate or more has been prepaid, shall be forwarded, charged with the deficient postage, to be collected and retained by the Post Department of the country of destination. Letters fully prepaid, received in either country from the other, shall be delivered free of all charge whatsoever.

The United States post-office shall levy and collect to its own use on newspapers addressed to or received from New South Wales a postage-charge of two cents, and on all other articles of printed matter, patterns and samples of merchandise, addressed to or received from New South Wales, a postage-charge of four cents per each weight of four ounces or fraction of four ounces.

The post-office of New South Wales shall levy and collect to its own use on newspapers and other articles of printed matter, patterns and samples of merchandise, addressed to or received from the United States, the regular rates of domestic postage chargeable thereon by the laws and regulations of the colony of New South Wales.

Newspapers and all other kinds of printed matter, and patterns and samples of merchandise, are to be subject to the laws and regulations of each country respectively, in regard to their liability to be rated with letter-postage, when containing written matter, or for any other cause specified in said laws and regulations, as well as in regard to their liability to customs-duty under the revenue-laws.

#### ARTICLE 4.

The United States office engages to grant the transit through the United States, as well as the conveyance by United States mail-packets, of the correspondence in closed mails which the New South Wales post-office may desire to transmit via the United States to British Columbia, the British North American Provinces, the West Indies, Mexico, Central and South America, and at the following rates of United States transit-postage, viz :

For the United States territorial transit of closed mails from New South Wales for Mexico, British Columbia, Canada, or other British North American Provinces, when transmitted entirely by land-routes, six cents per ounce for letter-mails and sixteen cents per pound for all kinds of printed matter.

For the United States territorial and sea transit of closed mails from New South Wales for British Columbia or other British North American Provinces, Mexico, Central and South America, or the West India Islands, when transmitted from the United States by sea, twenty-five cents per ounce for letter-mails and twenty cents per pound for all kinds of printed matter.

The New South Wales post-office shall render an account to the United States post-office, upon letter-bills to accompany each mail, of the weight of the letters, and also of the printed and other matter contained in such closed mails forwarded to the United States for transmission to either of the above-named countries and colonies, and the accounts arising between the two offices on this class of correspondence shall be stated, adjusted, and settled quarterly, and the amounts of the United States transit-charges found due on such closed mails shall be promptly paid over by the New South Wales post-office to the United States post-office, in such manner as the Postmaster-General of the United States shall prescribe.

#### ARTICLE 5.

Prepaid letters from foreign countries, received in and forwarded from the United States to New South Wales, shall be delivered in said colony free of all charges whatsoever, and letters received in New South Wales from the United States, addressed to other colonies of Australia, will be forwarded to destination, subject to the same conditions as are applicable to correspondence originating in New South Wales and addressed to those countries.

#### ARTICLE 6.

In the event of any of the Australian colonies not agreeing with New South Wales and New Zealand to contribute to the maintenance of any line of mail-packets plying between New South Wales and New Zealand and the United States of America, and subsidized by New South Wales and New Zealand, the New South Wales post-office may require the United States post-office not to forward by such subsidized packets

any mails, letters, newspapers, or other articles addressed to such colony; and the New South Wales post-office may refuse to transmit to their destination all mails, letters, newspapers, or other printed matter addressed to such colony and received in New South Wales from the United States by such subsidized packets; and may refuse to forward to their destination by such subsidized packets all mails, letters, newspapers, or other printed matter received in New South Wales from such colony and addressed to the United States of America or elsewhere.

## ARTICLE 7.

The two Post Departments may, by mutual agreement, provide for the transmission of registered articles in the mails exchanged between the two countries.

The register-fee for each article shall be ten cents in the United States and fourpence in New South Wales.

## ARTICLE 8.

The two Post Departments shall settle, by agreement between them, all measures of detail and arrangement required to carry this convention into execution, and may modify the same in like manner from time to time as the exigencies of the service may require.

## ARTICLE 9.

Every fully-prepaid letter dispatched from one country to the other shall be plainly stamped with the words "Paid all," in *red ink*, on the right-hand upper corner of the address, in addition to the date-stamp of the office at which it was posted; and on insufficiently-paid letters the amount of the deficient postage shall be inscribed in *black ink*.

## ARTICLE 10.

Dead-letters, which cannot be delivered from whatever cause, shall be mutually returned without charge, monthly, or as frequently as the regulations of the respective offices will permit.

## ARTICLE 11.

This convention shall come into operation on the first day of February, 1874, and shall be terminable at any time on a notice by either office of six months.

Done in duplicate and signed in Washington the fifteenth day of January, in the year of our Lord one thousand eight hundred and seventy-four.

[SEAL.]

JNO. A. J. CRESWELL,  
*Postmaster-General of the United States.*

[SEAL.]

SAML. SAMUELS,  
*Postmaster-General of New South Wales.*

I hereby approve the foregoing convention, and in testimony thereof have caused the seal of the United States to be affixed.

[SEAL.]

U. S. GRANT.

By the President:

HAMILTON FISH,  
*Secretary of State.*

WASHINGTON, January 15, 1874.



ADDITIONAL ARTICLES OF AGREEMENT BETWEEN THE POST-OFFICE DEPARTMENT OF THE UNITED STATES OF AMERICA AND THE POSTAL ADMINISTRATION OF SWITZERLAND FOR AN EXCHANGE OF POSTAL CARDS BETWEEN THE TWO COUNTRIES.

ARTICLE 1.

For the purpose of providing additional facilities of mail communication between the United States of America and Switzerland, it is hereby mutually agreed that United States postal cards, mailed at any post-office in the United States and addressed to Switzerland, and Swiss postal cards mailed at any post-office in Switzerland and addressed to the United States, the postage on which shall have been fully prepaid to destination at the rates hereinafter stated, can henceforth be exchanged between the inhabitants of the United States and of Switzerland. But unpaid or insufficiently-paid postal cards will not be forwarded in the mails between the two countries.

ARTICLE 2.

Postal cards shall be forwarded exclusively by means of such direct steamers as shall from time to time be employed in the transportation of the direct German-American mails between New York and Bremen or Hamburg. Each of the two Post Departments shall pay the entire expenses of the intermediate sea and territorial transport of the postal cards which are sent from its territory.

ARTICLE 3.

The postage on postal cards sent in each direction is fixed as follows:

1. At 2 cents when sent from the United States of America.
2. At 10 centimes when sent from Switzerland.

Each Department shall retain to its exclusive use the postage which it collects at the prescribed rates on the postal cards sent from its territory.

ARTICLE 4.

The regulations and instructions governing the use and treatment of postal cards in the domestic mail of the United States and of Switzerland, respectively, shall apply equally to the postal cards mailed in either country and addressed to the other country.

ARTICLE 5.

This agreement shall go into effect on the 1st of May, 1874, and shall have equal duration with the postal convention of 11th October, 1867, and with the additional conventions concluded thereto.

Done in duplicate and signed in Washington the 21st April, 1874, and in Berne the 31st March, 1874.

[L. S.]

JNO. A. J. ORESWELL  
*Postmaster-General of the United States.*  
*The Federal Post-Department:*  
EUGÈNE MOREL.

[L. S.]

I hereby approve the foregoing additional articles, and in testimony thereof I have caused the seal of the United States to be affixed.

[L. S.]

U. S. GRANT.

By the President :

HAMILTON FISH,

*Secretary of State.*

WASHINGTON, April 21st, 1874.

---

POSTAL CONVENTION BETWEEN THE UNITED STATES OF AMERICA AND  
THE REPUBLIC OF FRANCE.

The undersigned, John A. J. Creswell, Postmaster-General of the United States of America, in virtue of the powers vested in him by law, and M. Amédée Bartholdi, officer of the national order of the Legion of Honor, Envoy Extraordinary and Minister Plenipotentiary from France at Washington, &c., &c., in the name of his government and by virtue of the powers which he has formally presented to this effect, have agreed upon the following articles, viz :

ARTICLE I.

There shall be between the postal administration of France and the postal administration of the United States an exchange, in closed mails, of letters, samples of merchandise, photographs, and printed matter of all kinds, by the following means of communication and transportation, viz :

1st. By the French mail-packets.

2d. By the packets of the Hamburg line.

3d. By the way of England and the packets employed in transporting the mails between Great Britain and the United States.

The expenses arising from the transportation of the mails by any one of the above-mentioned routes shall be defrayed by the dispatching office ; but it is understood that these expenses shall be defrayed in both directions by that of the two administrations which is able to secure the transportation upon the most favorable terms, the other administration to reimburse to it its share of the said expenses.

The United States postal administration, however, shall pay to the postal administration of France, for the conveyance of the mails sent from the United States to France by means of the French packets, the same sea-rates as those which the said United States postal administration would pay, according to American legislation, for the maritime conveyance of the same mails by steamers of commerce. It is also understood that these rates are not to be lower than those which the postal administration of France shall have to pay for the conveyance by the Hamburg packets of the mails which it shall send by these packets to the United States.

ARTICLE II.

Persons who desire to send ordinary, that is to say not registered, letters, either from France and Algeria, for the United States and its territories, or from the United States and its territories for France and Algeria, may, at their option, leave the postage on said letters to be paid by the addressees, or they can prepay said postage to destination.

## ARTICLE III.

The charge to be levied in France upon letters originating in or addressed to the United States shall be 50 centimes per 10 grammes or fraction of 10 grammes, under the reservation for the French government of the power of hereafter applying the progression of 15 grammes. The charge to be levied in the United States upon letters originating in or addressed to France shall be 9 cents per 15 grammes or fraction of 15 grammes. Independently of the charges mentioned above, a fixed fee of 25 centimes, or 5 cents, as the case may be, shall be levied upon the unpaid letters.

In regard to the letters insufficiently paid by means of postage-stamps, they shall be treated as unpaid letters, saving deduction of the amount of the postage-stamps; but when the charge resulting from this deduction shall give a fraction of half décime French, or of a cent American, an entire half décime or cent, as the case may be, shall be levied for the fraction.

## ARTICLE IV.

The public of the two countries may send letters, registered, from one country to the other.

The postage on such registered letters must always be prepaid to destination.

Every registered letter sent from France and Algeria to the United States and its territories shall bear, on departure, in addition to the postage applicable to an ordinary paid letter of the same weight, a fixed fee of 50 centimes; and, reciprocally, every registered letter sent from the United States and its territories to France and Algeria shall bear, on departure, in addition to the postage applicable to a paid letter of the same weight, a fixed fee of 10 cents.

## ARTICLE V.

Samples of merchandise or of grains, photographs, engravings, and lithographs, newspapers, periodicals, sewed or bound books, pamphlets, sheets of music, catalogues, prospectuses, announcements, and various circulars, printed, engraved, lithographed, or autographed, which shall be sent either from France and Algeria to the United States and its territories, or from the United States and its territories to France and Algeria, must be prepaid, on both sides, to destination.

The rates of prepayment shall be fixed by the government of the country of origin.

## ARTICLE VI.

Each administration shall retain the whole amount of the sums which it shall have collected by authority of Articles III, IV, and V preceding.

It is formally agreed, between the two contracting parties, that such objects as are designated in the said articles, which shall have been prepaid to destination, cannot, under any pretext or title whatever, be subjected, in the country of destination, to any postage or fee to the charge of the addressees.

## ARTICLE VII.

The two administrations may reciprocally deliver in open mails ordinary letters and printed matter of all kinds coming from or addressed to the countries to which they serve respectively as intermediaries; and

also registered letters coming from or addressed to such of those countries to which the payment of ordinary letters can be effected to destination.

This delivery shall take place according to the following arrangements:

The correspondence exchanged between France or Algeria and the countries to which the United States serve as intermediaries shall be made subject to the following settlements:

1st. To the payment by the French administration, to the American administration, when the postage shall be collected in France or Algeria, of a rate of postage equal to that which is paid by the inhabitants of the United States for the correspondence which they exchange with the same countries.

2d. To the payment by the American administration to the French administration, when the postage shall be collected in the countries to which the United States serve as intermediaries, of a rate of French postage of 4 cents per 10 grammes or fraction of 10 grammes for ordinary letters, of 8 cents per 10 grammes or fraction of 10 grammes for registered letters, and of 1 cent per 40 grammes or fraction of 40 grammes for printed matter of all kinds.

Reciprocally the correspondence exchanged between the United States and the countries to which France serves as intermediary, shall be made subject to the following settlements:

1st. To the payment by the American administration to the French administration, when the postage shall be collected in the United States, of a rate of postage equal to that which is paid by the inhabitants of France and Algeria for correspondence which they exchange with the same countries.

2d. To the payment by the French administration to the American administration, when the postage shall be collected in the countries to which France serves as intermediary, of an American rate of postage of 20 centimes per 15 grammes or fraction of 15 grammes for ordinary letters; and of 40 centimes per 15 grammes or fraction of 15 grammes for registered letters, and of 5 centimes per 40 grammes or fraction of 40 grammes for printed matter of all kinds.

The correspondence exchanged between the countries to which France serves as intermediary and the countries to which the United States serve as intermediaries, shall be made subject to the following settlements:

1st. To the payment by the French administration to the American administration, if the postage on the correspondence is collected in the countries to which France serves as intermediary, of a rate of postage equal to the postage paid by the inhabitants of the United States for the correspondence which they exchange with the countries to which the United States serve as intermediaries.

2d. To the payment by the American administration to the French administration, if the postage on the correspondence is collected in the countries to which the United States serve as intermediaries, of a rate of postage equal to that paid by the inhabitants of France and Algeria for the correspondence which they exchange with the countries to which France serves as intermediary.

The expenses of intermediate transportation between France and the United States of the correspondence to which apply the provisions of the present article shall be defrayed by that of the two postal administrations of France or of the United States by which, or on the side of which, the postage shall be collected.

## ARTICLE VIII.

Samples of merchandise shall not be admitted to the benefits of a reduced rate, unless they are in themselves of no commercial value, unless they are placed under band, or in such a manner as to leave no doubt of their nature, and unless they bear no other writing by the hand than the address, a mark of fabric or of the merchant, numbers of order, and price.

In order to benefit by a reduced rate, the photographs and printed matter mentioned in Articles V and VII should also be placed under band, and bear no writing, figure, or sign whatever, made by hand, except the address, the signature of the sender, or a date.

The samples of merchandise, photographs, and printed matter which do not fulfill the conditions mentioned above, or which have not been prepaid to the fixed limit, shall be considered as letters, and charged accordingly.

It is understood that the provisions contained in the present article, and in Articles V and VII preceding, do not impair in any manner the right of the postal administrations of the two countries not to permit upon their respective territories the transportation and distribution of photographs, lithographs, engravings, and printed matter, which are not in accordance with the laws, ordinances, or decrees which regulate the conditions of their publication and circulation both in France and in the United States.

## ARTICLE IX.

The postal administrations of France and of the United States shall not admit to destination in either of the two countries, or in the countries using their intermediary, any package or letter containing gold or silver money, jewels, or articles of intrinsic value, or any object subject to customs-duty.

Liquids and articles which may injure the correspondence, and which are prohibited in the country of destination, shall not be admitted under any form to be dispatched through the post-office.

No package of more than 60 centimetres or 2 feet, American, in length, and of more than 30 centimetres or 1 foot, American, in the other dimensions, can be sent from one of the two countries to the other through the post-office.

## ARTICLE X.

The French government agrees to cause to be transported, in closed mails, either across France or by means of the French maritime postal service, the correspondence which the postal administration of the United States may desire to exchange with other countries by the intermediary of the French post-office; and reciprocally the Government of the United States agrees to cause to be transported, in closed mails, either across the United States or by means of American maritime postal services, the correspondence which the postal administration of France may desire to exchange with other countries by the intermediary of the United States post-office.

The postal administration of France shall pay to the postal administration of the United States, viz:

1st. The sum of 6 francs per kilogramme on letters, and 1 franc per kilogramme on samples and prints, for the transportation across the territory of the United States of the closed mails which shall be exchanged between France and other countries via San Francisco.



2d. The sum of 10 francs per kilogramme on letters, and 1 franc per kilogramme on samples and printed matter, for the transportation across the territory of the United States of the closed mails which shall be exchanged by any other route than that of San Francisco between France and its colonies, or all other places where it shall have postal establishments, or the countries with which it is at present bound by postal conventions.

Reciprocally the postal administration of the United States shall pay to the postal administration of France, viz :

1st. The sum of \$1.20 per kilogramme on letters, and 20 cents per kilogramme on patterns and printed matter, for the transportation across French territory of the closed mails which shall be exchanged between the United States and other States by the Franco-Belgian or Franco-German frontier.

2d. The sum of \$2 per kilogramme on letters, and 20 cents per kilogramme on samples and prints, for the transportation across French territory of the closed mails which shall be exchanged by all other points of the French frontier than those contiguous to Germany or to Belgium between the United States and the countries with which the Government of the United States is at present bound by postal conventions.

When the closed mails coming from or addressed to France shall be transported between the French frontier and the American frontier by the packets of the Hamburg line, the postal administration of France shall pay to the postal administration of the United States, in addition to the American territorial transit-rates above mentioned, the sum of 10 francs per kilogramme on letters, and the sum of 50 centimes per kilogramme on samples and printed matter, which may be contained in these mails.

Reciprocally, when the closed mails coming from or addressed to the United States shall be transported between the American frontier and the French frontier by the French mail-packets, the United States postal administration shall pay to the postal administration of France, in addition to the French territorial transit-rates above mentioned, the sum of \$2 per kilogramme on letters, and 10 cents per kilogramme on samples and printed matter, which may be contained in these mails.

The maritime postage for which the two postal administrations of France and of the United States will have to reciprocally account for upon the correspondence of all kinds transported in closed mails, by packets other than those navigating between France and the United States, will be the same as those applicable to correspondence of the same nature coming from or addressed to the countries which assure the maritime transportation of the said closed mails.

It is understood that the weight of the correspondence of all kinds which is found undeliverable, as also that of the letter-bills and other documents of account arising from the exchange of the correspondence transported in closed mails by either of the two administrations for the account of the other, shall not be included in the weight of the letters, samples, or printed matter, upon which should be levied the territorial and maritime transit-rates required in virtue of the present article.

#### ARTICLE XI.

There shall be prepared every three months, by the postal administration of France, particular accounts, recapitulating the proceedings of the transmission of the correspondence between the respective exchange-offices.

These accounts, which shall have for basis and vouchers the acknowledgments of receipt for the mails during the quarterly period, shall be summed up in a general account, designed to present the definitive results of the transmission of the correspondence exchanged between the two administrations.

After having been reciprocally examined and approved, the general account above mentioned shall be paid, by the administration recognized as debtor towards the other, in the course of the second quarter following that to which the account refers.

The balances of the accounts shall be paid as follows, viz :

1st. In drafts upon Washington, and in American money, when the balance is in favor of the United States office.

2d. In drafts upon Paris, and in French money, when the balance is in favor of the French office.

In the establishment of the accounts, and in all matters relative to the execution of the convention, the dollar shall be considered the equivalent of 5 francs 20 centimes.

#### ARTICLE XII.

Ordinary or registered letters, samples of merchandise, photographs, and printed matter, wrongly addressed or wrongly sent, shall be, without delay, reciprocally returned through the intermediary of the respective exchange-offices for the weight and rate at which the sending office shall have delivered these objects in account to the other office.

Articles of the same nature, which may have been sent to addressees who have left for the country of origin of these letters, shall be respectively returned, charged with the postage which would have been paid by the addressees.

Ordinary letters and articles under band, which shall have originally been delivered to the postal administration of France, or to the postal administration of the United States, by other administrations, and which, in consequence of change of residence of the addressees, must be returned from one of the two countries to the other, shall be reciprocally delivered, charged with the postage required at the place of first destination.

#### ARTICLE XIII.

Ordinary or registered letters, samples of merchandise, photographs, and printed matter, exchanged in open mails between the two postal administrations of France and of the United States, and which shall be found undeliverable, for any cause whatsoever, must be reciprocally returned at the end of each month, and oftener if possible.

Such articles as shall have entered into the accounts shall be returned for the rate at which they shall have been originally entered on the account by the dispatching office.

Such as shall have been delivered prepaid to destination or to the frontier of the corresponding office shall be returned without charge or discount.

#### ARTICLE XIV.

The postal administration of France and the postal administration of the United States shall designate by common accord the offices through which the exchange of the respective correspondence should take place;



they shall regulate the routes of the correspondence reciprocally transmitted, and the form of the accounts mentioned in the preceding article XI, and also every other measure of detail or order necessary to assure the execution of the stipulations of the present convention.

It is understood that the measures designated above may be modified by the two administrations whenever, by common accord, they shall perceive such necessity.

#### ARTICLE XV.

The present convention shall have force and effect from the day agreed upon by the two parties, and shall remain obligatory from year to year, until one of the two parties shall have made known to the other, a year in advance, its intention to terminate the same.

During this last year the convention shall continue to have full and entire force, without prejudice to the liquidation and the balance of the accounts between the respective administrations after the expiration of said term.

#### ARTICLE XVI.

The present convention shall be ratified and the ratifications exchanged as soon as possible.

In faith of which the respective plenipotentiaries have signed the present convention and have affixed their seals thereto.

Done in duplicate and signed at Washington the twenty-eighth day of April, in the year of our Lord one thousand eight hundred and seventy-four.

[SEAL.]

JNO. A. J. CRESWELL,  
*Postmaster-General of the United States.*

[SEAL.]

A. BARTHOLDI.

I hereby approve the foregoing convention, and in testimony thereof I have caused the seal of the United States to be affixed.

[SEAL.]

U. S. GRANT.

By the President:

HAMILTON FISH,  
*Secretary of State.*

WASHINGTON, April 28, 1874.

---

[Translation.]

Having seen and examined the above convention, we have approved it, and do approve, by virtue of the provisions of the law voted by the National Assembly, in the session of 25th June, 1874. In faith of which we have caused to be placed hereupon the seal of the republic.

Given at Versailles, June 26, 1874.

[SEAL.] MARÉCHAL MAC MAHON, DUC DE MAGENTA.

By the President of the French Republic:

The Minister of Foreign Affairs,

DECAZES.

We, J. W. Marshall, Postmaster-General of the United States, and Amédée Bartholdi, officer of the Legion of Honor, envoy extraordinary and minister plenipotentiary of France, certify that on this date we have proceeded to perform the exchange of ratifications of the postal convention which was concluded between the United States and the French Republic at Washington the 28th day of April, one thousand eight hundred and seventy-four.

Done in duplicate and signed at Washington this seventeenth day of July, one thousand eight hundred and seventy-four.

[SEAL.]

J. W. MARSHALL,  
Postmaster-General.

[SEAL.]

A. BARTHOLDI.

---

*Regulations of detail and order, concluded between the postal administration of the United States and the postal administration of France, for the execution of the postal convention of 28th April, 1874.*

In view of the postal convention concluded the 28th of April, 1874, between the United States and France, stipulating (Article XIV) that the postal administrations of the two countries shall designate, by common accord, the offices through which the exchange of the respective correspondence shall take place, and shall regulate the direction of the correspondence reciprocally transmitted, the form of accounts, as well as every other measure of detail or order necessary to assure the execution of the said convention, the Postmaster-General of the United States of the one part, and the Director General of Posts of France of the other part, have agreed as follows:

#### ARTICLE 1.

The exchange of correspondence between the postal administration of France and the postal administration of the United States shall be effected as follows:

On the side of the postal administration of France—

- 1st. By the office of Paris.
- 2d. By the office of Havre.
- 3d. By the office of Cherbourg.
- 4th. By the office of Brest.
- 5th. By the traveling office of Paris to Calais.
- 6th. By the traveling office of Lille to Calais.

On the side of the postal administration of the United States—

- 1st. By the office of Boston.
- 2d. By the office of New York.

#### ARTICLE 2.

The relations between the French exchange-offices and the American exchange-offices shall be established in the following manner, viz:

*By the way of the French mail-packets.*—The offices of Paris, Havre, and Brest shall correspond with the office of New York.

*By the way of the packets of the Hamburg line.*—The offices of Paris and Havre shall make up mails for the office of New York, and the office of New York shall make up mails for the offices of Paris, Havre, and Cherbourg.

*By the way of England.*—The offices of Paris and Hâvre and the traveling offices of Paris to Calais and Lille to Calais shall correspond with the offices of Boston and New York.

### ARTICLE 3.

In conformity with Article I of the convention of 28th April, 1874, the postal administration of the United States shall pay, on account of the postal administration of France, the expenses of the intermediary transportation of the mails which shall be sent from France to the United States, as well by means of the Hamburg packets navigating between France and the United States as by the way of England and the packets used for the conveyance of the correspondence of the British Kingdom to the United States.

These expenses shall be re-imbursed by the postal administration of France to the postal administration of the United States, as follows:

1st. At the rate of 30 centimes per thirty grammes of letters, and 50 centimes per kilogramme of samples of merchandise or printed matter, for such of the said mails as shall be forwarded by means of the Hamburg packets.

2d. At the rate of 44 centimes per thirty grammes of letters, and 1 franc per kilogramme of samples of merchandise or printed matter, for such of the said mails as shall be forwarded by the way of England and the packets used for the conveyance of the correspondence between England and the United States.

On its side, the postal administration of France shall assure, on account of the postal administration of the United States, the intermediary transportation of the mails which shall be forwarded from the United States to France by means of the French mail-packets.

The postal administration of the United States shall pay for this transportation to the postal administration of France the same rates, per thirty grammes of letters and per kilogramme of samples of merchandise or printed matter, as those at which the intermediary transportation is hereinabove fixed, by Hamburg packets, of the mails from France for the United States.

### ARTICLE 4.

The correspondence exchanged between the postal administration of France and the postal administration of the United States shall be forwarded in conformity with table A, annexed to the present regulations.

### ARTICLE 5.

Correspondence sent in transit, in open mail, conformably to Article VII of the convention of 28th April, 1874, shall be exchanged between the postal administration of France and the postal administration of the United States on the conditions respectively fixed by the said article and by tables B and C, annexed to the present regulations.

The postage charges which the two administrations shall have mutually to carry to account for this correspondence shall be stated by the dispatching exchange-offices in ordinary figures, and uniformly on the upper left side of the address, as follows:

In red ink, on prepaid objects entered by the dispatching office to the credit of the corresponding office.

In black ink, on unpaid objects entered by the dispatching office to the debit of the corresponding office.

## ARTICLE 6.

Registered letters, which shall be reciprocally forwarded by the postal administrations of France and the United States, shall be marked, on the side of the address, with a stamp, bearing in red ink the word "*Chargé*," or the word "*Registered*," as the case may be.

## ARTICLE 7.

Ordinary letters, registered letters, samples of merchandise, and printed matter, sent either from the offices depending upon the postal administration of France for the United States and the countries to which the United States serves as intermediary, or from the offices depending upon the postal administration of the United States for France, Algeria, and the countries to which France serves as intermediary, shall be marked on the side of the address with a stamp, indicating the date of mailing and the place of origin.

## ARTICLE 8.

The postal administration of the United States shall cause to be placed on the address of the prepaid objects which the American exchange-offices shall forward to the French exchange-offices the impression, in red ink, of the stamp "*Paid*."

On its side, the postal administration of France shall cause to be placed the impression, in red ink, of the stamp "*P. D.*" upon the objects prepaid to destination; and of the stamp "*PP.*" upon the objects prepaid by compulsion to any limit whatever of their course, which shall be forwarded by the French exchange-offices to the American exchange-offices.

The stamp "*Affranchissement insuffisant*," or "*Insufficiently prepaid*," as the case may be, shall be placed upon letters insufficiently paid.

## ARTICLE 9.

Each of the mails exchanged between the postal administrations of the two countries shall be accompanied by a letter-bill, upon which the exchange-offices shall state, with the classifications established by the convention of 28th April, 1874, as follows:

1st. The nature and the number of the objects which the mail shall contain.

2d. The number of single rates relating to the correspondence of the one of the two countries for the other.

3d. The weights or sums to be carried to account for each class of correspondence.

The office to which the mail shall be addressed shall acknowledge the receipt thereof to the dispatching office by the first mail thereafter.

The letter-bills and acknowledgments of receipt of the French exchange-offices shall conform to models D and E, annexed to the present regulations.

The forms of letter-bill and acknowledgment of receipt, of which the American exchange-offices shall make use in their relations with the French exchange-offices, must accord with the models hereinabove designated.

## ARTICLE 10.

The correspondence described in the letter-bills shall be divided into as many packets as this correspondence will admit of lines or special articles.

Each packet shall be placed under a label, indicating the nature and the weight of the correspondence, as well as the number of objects and the number of single-rates or the sums, as the case may be, inscribed upon the letter-bill.

#### ARTICLE 11.

Registered letters shall be entered by names on the letter-bill of the dispatching office, with all the details which this bill allows.

These letters shall form a special packet, covered with an envelope of white paper, sealed on all the folds by means of the seal of the dispatching office, and surrounded by a string placed crosswise. The ends of this string shall be attached to the bottom of the letter-bill by means of a gum seal.

The letter-bill must bear the stamp "*Chargé*," or "*Registered*," whenever the mail shall contain one or more registered letters.

#### ARTICLE 12.

Every mail, after having been tied up interiorly, must be enveloped in gray paper, in sufficient quantity to resist the friction, then tied exteriorly and sealed with wax, with the impression of the office seal.

The string which shall surround a mail exteriorly must always be without knot.

#### ARTICLE 13.

In case that, on the day fixed for the dispatch of the mails, an exchange-office should have no object to address to the corresponding office, this exchange-office must nevertheless send, in the ordinary form, a mail, which shall contain only a negative letter-bill.

#### ARTICLE 14.

The postage or charge upon letters that have become dead, from whatever cause, which the two administrations shall return to each other, by virtue of Article XIII of the convention of 28th April, 1874, shall only be admitted in release of the administration to which these letters shall have been originally transmitted, so far as the condition of their seals shall not give reason to suppose that they have been opened.

However, scurrilous letters, and those commonly called decoy letters, may be comprised and admitted in the dead matter reciprocally returned, even though these letters may have been opened.

#### ARTICLE 15.

Letters not claimed, addressed *poste-restante* or in furnished hotels, may, after three months' stay, be returned on both sides, under the conditions fixed by Article XIII, before cited, and the preceding article.

The account of the total of dead matter shall be prepared in *borderaux*, conforming to the model F, annexed to the present regulations.

#### ARTICLE 16.

It is agreed that the provisions of the convention of 28th April, 1874, and of the present regulations, shall be put into execution the 1st of August, 1874.

Done in duplicate and signed at Washington the 9th of June, 1874, and at Paris the 26th of June, 1874.

[SEAL.]

JNO. A. J. CRESWELL,  
*Postmaster General.*

[SEAL.]

LE LIBON,  
*Director-General of Posts.*

## A.

Table indicating the direction to be received by the correspondence exchanged between the postal administration of France and the postal administration of the United States.

Mails from the French offices.			Mails from the American offices.		
Offices.		Destination of the objects comprised in the mails from the offices designated in the first column for the offices designated in the second column.	Offices.		Destination from the offices.
Dispatching.	Receiving.		Dispatching.	Receiving.	
1	2	3	1	2	3
Paris ..... Havre ..... Brest .....	New York ..	§ 1.—BY WAY OF THE FRENCH MAIL-PACKETS.	New York ..	Havre .....	Havre ..
		{ The United States and the countries to which the United States serves as intermediary.		Brest .....	and Haute-Vienne. The rest of France, Algeria, and the countries to which France serves as intermediary.
		§ 2.—BY WAY OF THE HAMMOG PACKETS.		Paris .....	
Paris ..... Havre ..... Brest .....	New York ..	{ The United States and the countries to which the United States serves as intermediary.	New York ..	Cherbourg .....	Andree, Enre, and Soine-
				Havre .....	the countries to which
				Paris .....	

§ 3.—BY THE WAY OF ENGLAND.					
By the packets for New York.					
Havre ..... Paris ..... Travelling - office of Lille to Calais. Travelling - office of Paris to Calais.	{ Boston..... New York.	{ The States of Massachusetts, Maine, Vermont, New Hampshire, and Rhode Island. The rest of the United States and the countries to which the United States serves as inter- mediary.	{ New York? Boston.....	{ Havre ..... Paris ..... Travelling - office of Calais to Lille. Travelling - office of Calais to Paris.	
By the packets for Boston.					
Havre ..... Paris ..... Travelling - office of Lille to Calais. Travelling - office of Paris to Calais.	Boston.....	{ The States of Massachusetts, Maine, Vermont, New Hampshire, and Rhode Island.			
Havre. Paris. The department of the Nord, Belgium, the Nether- lands, and the northern states of Europe. The rest of France and the other foreign countries to which France serves as intermediary.					



B.

Table indicating the rates to be paid by the postal administration of the United States to countries to which France

Designation of the countries.	Nature of the correspondence.	Correspondence
		Conditions of payment.
1	2	3
England, Belgium, Switzerland, Luxemburg .....	{ Ordinary letters .. Registered letters .. Samples & prints ..	Optional .....
		Compulsory ..
		do .....
Germany, Italy, the Netherlands, Portugal, Malta .....	{ Ordinary letters .. Registered letters .. Samples & prints ..	Optional .....
		Compulsory ..
		do .....
Denmark, Russia .....	{ Ordinary letters .. Registered letters .. Samples & prints ..	Optional .....
		Compulsory ..
		do .....
Austria, Greece, Sweden .....	{ Ordinary letters .. Registered letters .. Samples & prints ..	Optional .....
		Compulsory ..
		do .....
Norway .....	{ Ordinary letters .. Registered letters .. Samples & prints ..	Optional .....
		Compulsory ..
		do .....
Roumania, Servia, Montenegro, Tangiers, Tunis, and cities of the Levant in which France maintains post-offices.*	{ Ordinary letters .. Registered letters .. Samples & prints ..	Optional .....
		Compulsory ..
		do .....
Brazil, French, English, and Netherland colonies and possessions in Africa and America .....	{ Ordinary letters .. Registered letters .. Samples & prints ..	Optional .....
		Compulsory ..
		do .....
French, English, and Netherland colonies and possessions in Asia and Oceanica, (except Southern Australia and Tasmania, Shanghai, China, and Yokohama, Japan.)	via Marseilles and Suez.. { Ordinary letters .. Registered letters .. Samples & prints ..	Optional .....
	via Brindisi .....	Compulsory ..
Spain and Gibraltar .....	Ordinary letters ..	Optional .....
	Samples & prints ..	do .....
Southern Australia and Tasmania..	via Marseilles and Suez.. { Ordinary letters ..	do .....
	{ via Brindisi .....	Samples & prints ..
		do .....
		do .....
Countries beyond the sea other than those above designated.	{ French or English packets	Ordinary letters ..
		Samples & prints ..
	{ via Brindisi .....	Ordinary letters ..
		Samples & prints ..

\* Alexandria, Alexandretta, Beirut, Cairo, Constantinople, Dardanelles, Ineboli, Jaffa, Kerassee, Sulina, Trebizond, Tripoli in Syria, Tultcha, Varna.

B.

*the postal administration of France for the correspondence originating in or destined for the serves as intermediary.*

addressed to the countries designated in first column of the table.		Correspondence originating in the countries designated in the first column of the table.		
Limit of payment.	Rate to be paid by the American office to the French office for each pre-paid object.	Conditions of payment.	Limit of payment.	Rate to be paid by the American office to the French office for each unpaid object.
4	5	6	7	8
Destination.....	6 cts. pr. 10 grms.	Optional.....	Destination.....	10 cts. pr. 10 grms.
...do.....	12 cts. pr. 10 grms.	Compulsory...	...do.....	10 cts. pr. 10 grms.
...do.....	2 cts. pr. 40 grms.	...do.....	...do.....	10 cts. pr. 10 grms.
...do.....	8 cts. pr. 10 grms.	Optional.....	...do.....	12 cts. pr. 10 grms.
...do.....	16 cts. pr. 10 grms.	Compulsory...	...do.....	12 cts. pr. 10 grms.
...do.....	2 cts. pr. 40 grms.	...do.....	...do.....	12 cts. pr. 10 grms.
...do.....	10 cts. pr. 10 grms.	Optional.....	...do.....	14 cts. pr. 10 grms.
...do.....	20 cts. pr. 10 grms.	Compulsory...	...do.....	14 cts. pr. 10 grms.
...do.....	3 cts. pr. 40 grms.	...do.....	...do.....	14 cts. pr. 10 grms.
...do.....	12 cts. pr. 10 grms.	Optional.....	...do.....	16 cts. pr. 10 grms.
...do.....	24 cts. pr. 10 grms.	Compulsory...	...do.....	16 cts. pr. 10 grms.
...do.....	3 cts. pr. 40 grms.	...do.....	...do.....	16 cts. pr. 10 grms.
...do.....	14 cts. pr. 10 grms.	Optional.....	...do.....	18 cts. pr. 10 grms.
...do.....	28 cts. pr. 10 grms.	Compulsory...	...do.....	18 cts. pr. 10 grms.
...do.....	3 cts. pr. 40 grms.	...do.....	...do.....	18 cts. pr. 10 grms.
...do.....	16 cts. pr. 10 grms.	Optional.....	...do.....	20 cts. pr. 10 grms.
...do.....	32 cts. pr. 10 grms.	Compulsory...	...do.....	20 cts. pr. 10 grms.
...do.....	3 cts. pr. 40 grms.	...do.....	...do.....	20 cts. pr. 10 grms.
...do.....	20 cts. pr. 10 grms.	Optional.....	...do.....	24 cts. pr. 10 grms.
...do.....	40 cts. pr. 10 grms.	Compulsory...	...do.....	24 cts. pr. 10 grms.
Port of debarkation.	3 cts. pr. 40 grms.	...do.....	Port of embarkation....	4 cts. pr. 40 grms.
Destination.....	20 cts. pr. 10 grms.	Optional.....	Destination.....	24 cts. pr. 10 grms.
...do.....	40 cts. pr. 10 grms.	Compulsory...	...do.....	24 cts. pr. 10 grms.
Port of debarkation	3 cts. pr. 40 grms.	...do.....	Port of embarkation....	4 cts. pr. 40 grms.
Destination.....	26 cts. pr. 10 grms.	Optional.....	Destination.....	30 cts. pr. 10 grms.
...do.....	52 cts. pr. 10 grms.	Compulsory...	...do.....	30 cts. pr. 10 grms.
Port of debarkation	5 cts. pr. 40 grms.	...do.....	Port of embarkation....	6 cts. pr. 40 grms.
Frontier of depart- ure from France.	8 cts. pr. 10 grms.	...do.....	Frontier of entry in France.	12 cts. pr. 10 grms.
...do.....	2 cts. pr. 40 grms.	...do.....	...do.....	2 cts. pr. 40 grms.
Ports of the Great Southern Ocean. {	20 cts. pr. 10 grms.	...do.....	{ Point of junction of English and French services }	24 cts. pr. 10 grms.
	3 cts. pr. 40 grms.	...do.....		4 cts. pr. 40 grms.
	26 cts. pr. 10 grms.	...do.....		30 cts. pr. 10 grms.
Port of debarkation.	5 cts. pr. 40 grms.	...do.....	{ ..do..... }	6 cts. pr. 40 grms.
...do.....	20 cts. pr. 10 grms.	...do.....		24 cts. pr. 10 grms.
...do.....	3 cts. pr. 40 grms.	...do.....		4 cts. pr. 40 grms.
...do.....	26 cts. pr. 10 grms.	...do.....		30 cts. pr. 10 grms.
...do.....	5 cts. pr. 40 grms.	...do.....	Port of embarkation....	6 cts. pr. 40 grms.

Kustendjo, Lattaquia, Messina, Port Said, Rhodes,Salonica, Rodosto, Samsoun, Ordon, Smyrna, Suez,

## C.

Table indicating the rates to be paid by the postal administration of France to the postal administration of the United States for the correspondence originating in or destined for the countries to which the United States serves as intermediary.

Designation of the countries.	Nature of the correspondence.	Correspondence addressed to the countries designated in the first column of the table.			Correspondence originating in the countries designated in the first column of the table.		
		3	4	5	6	7	8
		Conditions of payment.	Limit of payment.	Rate to be paid by the French office for each prepaid object.	Conditions of payment.	Limit of payment.	Rate to be paid by the French office for each unpaid object.
1	2	3	4	5	6	7	8
except where otherwise stated.) Amirwall + Australia (except)	Letters.....	Prepayment obligatory.....	Port of debarkation.....	1. 00 per 4 oz.....	The United States postage cannot be prepaid in the country of origin.		50 per 4 oz.
	Newspapers.....	do.....	do.....	20 each.....	do.....		10 each.
	Other prints and samples.....	do.....	do.....	50 per 4 ozs.....	do.....		10 per 2 ozs.
Croix, Venezuela.	Letters.....	do.....	do.....	50 per 4 oz.....	do.....		50 per 4 oz.
	Newspapers.....	do.....	do.....	10 each.....	do.....		10 each.
	Other prints and samples.....	do.....	do.....	10 per 2 ozs.....	do.....		10 per 2 ozs.
Bahamas.....	Letters.....	do.....	do.....	15 per 4 oz.....	do.....		15 per 4 oz.
	Newspapers.....	do.....	do.....	10 each.....	do.....		10 each.
	Other prints and samples.....	do.....	do.....	10 per 2 ozs.....	do.....		10 per 2 ozs.
Bolivia, Chili, Peru.....	Letters.....	do.....	do.....	1. 00 per 4 oz.....	do.....		50 per 4 oz.
	Newspapers.....	do.....	do.....	20 each.....	do.....		10 each.
	Other prints and samples.....	do.....	do.....	50 per 4 ozs.....	do.....		10 per 2 ozs.
Brazil.....	Letters.....	do.....	Destination.....	75 per 4 oz.....	Obligatory.....	Port of re-embarkation in United States	(1)
	Newspapers.....	do.....	Port of debarkation.....	10 each.....	do.....		10 each.
	Other prints and samples.....	do.....	do.....	10 per 4 ozs.....	do.....		10 per 4 ozs.

Canada* and Prince Edward Island.*	Letters. Newspapers.	do do	Destination. Port of debarkation.	30 per ½ oz. .05 per 2 ozs.	Obligatory do	Destination Port of embarkation in United States.	(†) .05 per 2 ozs.
East Indies, British.	Other prints and samples	do	do	10 per 2 ozs.	do	do	.10 per 2 ozs.
	Letters	do	Destination	50 per ½ oz.	do	do	(†)
	Newspapers	do	do	10 each	do	do	(†)
	Other prints and samples	do	do	40 per 4 ozs.	do	do	(†)
Ecuador.	Letters	do	do	1.10 per ½ oz.	do	do	(†)
	Newspapers	do	do	10 each	do	do	.10 each.
	Other prints and samples	do	do	20 per 4 ozs.	do	do	.20 per 4 ozs.
	Letters	do	do	30 per ½ oz.	do	do	(*)
Hawaliwan Kingdom, (Sandwich Islands.)	Newspapers	do	do	.05 per 2 ozs.	do	do	.05 per 2 ozs.
	Other prints and samples	do	Port of debarkation.	20 per 4 ozs.	do	do	.20 per 4 ozs.
	Letters	do	do	50 per ½ oz.	do	do	(†)
	Newspapers	do	Destination	10 each	do	do	(†)
Hong-Kong and dependent Chinese ports.	Other prints and samples	do	do	50 per 4 ozs.	do	do	(†)
	Letters	do	do	60 per ½ oz.	do	do	(†)
	Newspapers	do	do	10 each	do	do	(†)
	Other prints and samples	do	Port of debarkation.	20 per 4 ozs.	do	do	(†)
New South Wales* and New Zealand.*	Letters	do	do	10 each	do	do	(†)
	Newspapers	do	do	20 per 4 ozs.	do	do	(†)

\* The extranational and United States postage on this correspondence being required to be fully prepaid in the country of origin, no charge is made against the French office.

† Registered letters are subject to a registration fee of 40 centimes per letter, in addition to the postage, (except to New South Wales and New Zealand, to which the fee is 60 centimes, and to Canada, to which the fee is 25 centimes.) Registered letters can be sent to Yokohama, only, in Japan, and to Shanghai, in China.



7	15	Unpaid letters { From the United States for the countries to which France serves as intermediary..... From the countries to which the U. S. serves as intermediary, for... { France and Algeria..... The countries to which France serves as intermediary.....	15 gra.	f. 0	f.	f.	a.
	16		15 gra.	20 (II)			
	17		10 gra.	(II)			
8		Samples and prints from the United States and from the countries to which the United States serves as intermediary, for Spain, Gibraltar, the colonies, and countries beyond the sea.....		(I)			
	18	Correspondence re-forwarded, (postage to be recovered) .....			f.	f.	a.
	19	Correspondence wrongly sent. { Prepaid—transit postage due the French office... Unpaid—transit postage due the American office..					

(I) See Table B, annexed to the convention.

(II) See Table C annexed to the convention.





**TABLE NO. 3.**—STATEMENT OF THE QUANTITIES WHICH ARE TO SERVE AS THE BASIS OF THE ACCOUNT FOR THE RATES OF INTERMEDIARY POSTAGE BETWEEN THE POSTAL ADMINISTRATIONS OF FRANCE AND THE UNITED STATES.

Nos. of the articles of account.		Designation of the correspondence.	Statement of the American exchange-office.	Verification of the French exchange-office.
Credit of France.	Credit of the U. S.		Net weight in grammes.	Net weight in grammes.
1	2	3	4	5
10	20	England. .... { Letters U. S. 1		
11	21	By French packets. { Letters 15, 16, 16 No. 1		
		By Hamburg packets. { Letters U. S. 2		
		6, 17, 18, and 19 of the credit of the nd 2, (except those entered in articles nd 8 of the credit of France) ..... is No. 1 ..... 6, 17, 18, and 19 of the credit of the		

TABLE No. 4.—CLOSED MAILS.

Nos of the articles of account.				Title under which the objects comprised in the closed mails must figure in the accounts.	Name of the dispatching office.	Name of the receiving office.	Statement of the American exchange-office.			Verification of the French exchange-office.		
Credit of France.		Credit of the U. S.					No. of closed mails.	Letters.	Net weight, in grammes, of the objects comprised in the closed mails.	No. of closed mails.	Letters.	Samples and prints of all kinds.
Letters.	Samples and prints.	Letters.	Samples and prints.									
1	2	3	4	5	6	7	8	9	10	11	12	13
				From Validi for France.....								
Total number of closed mails .....												

Certified by the undersigned, postmaster of \_\_\_\_\_



E.

POST-OFFICE DEPARTMENT OF THE  
UNITED STATES OF AMERICA. }

ACKNOWLEDGMENT OF RECEIPT.

{ CORRESPONDENCE  
WITH FRANCE.

From the office of \_\_\_\_\_ for the office of \_\_\_\_\_.

I have received (1) \_\_\_\_\_, 187 , your mail of the (2) \_\_\_\_\_, 187 , forwarded from (3) \_\_\_\_\_ to (4) \_\_\_\_\_, by the way of (5) \_\_\_\_\_.

(1) Date of arrival of the mail at the office of destination. (2) Date of departure of the mail from the office of origin. (3) Name of the port of embarkation. (4) Name of the port of debarkation. (5) Route employed—via England, via French packets, via Hamburg packets, as the case may be.

TABLE NO. 1.—ORDINARY CORRESPONDENCE.

Nos. of the articles of account.		Designation of the correspondence.	Progression of weight accord- ing to which must be estab- lished the sums or single rates to be carried to columns Nos. 7 and 9.	Sum to be carried to each single rate.	Statement of the French exchange-office.		Verification of the Amer- ican exchange-office.	
Credit of France.	Credit of the U. S.				Number of objects.	Number of single rates or sums.	Number of objects.	Number of single rates or sums.
1	2	3	4	5	6	7	8	9
		§ I.—CORRESPONDENCE FORWARDED FOR MEMORANDUM.	10 grs. 10 grs. 40 grs. 10 grs.			Single rates.		Single rates.
		Correspondence originating { Prepaid letters in France and Algeria ad- { Insufficiently-paid letters dressed to the United { Prepaid samples and prints of every nature. States. { Unpaid letters						
		§ II.—CORRESPONDENCE FORWARDED ON ACCOUNT.						
1		Prepaid letters from France for the countries to which the United States serves as intermediary	10 grs.	f. 0 (I) c. 20		Single rates.		Single rates.
2		Prepaid letters from the coun- { For the United States	10 grs.					
3		tries to which France serves { For the countries to which the United	10 grs.					
4		as intermediary. { States serves as intermediary	40 grs.	(I) 05				
5		Samples and prints from France for the countries to which the United States serves as intermediary	40 grs.	f. 0 (I) c. 05				
6		Prepaid samples and prints from { For the United States	40 grs.					
7		the countries to which the United States serves as intermediary	40 grs.					

12	Unpaid letters. { From France for the countries to which the United States serves as an intermediary..... From foreign countries to { The United States..... which France serves as intermediary for..... The countries to which the United States serves as intermediary..... Samples and prints from colonies and countries beyond the sea, from Spain and Gibraltar, for the United States and the countries to which the United States serves as intermediary ..... Correspondence to be re-forwarded, (postage to be recovered) ..... Correspondence { Prepaid—transit postage due the American office ..... wrongly sent. { Unpaid—transit postage due the French office .....	10 gra. 10 gra.	4 centa. (II)	Cents.	Cents.
13		10 gra.	(II)	f. c.	Cents.
14		10 gra.	(II)	f. c.	Cents.
15		40 gra.	(II)	f. c.	Cents.
16		.....	.....	.....	.....
17	7	.....	.....	.....	.....

(I) See Table C, annexed to the convention. (II) See Table B, annexed to the convention.

TABLE NO. 2.—REGISTERED LETTERS ORIGINATING IN FRANCE, ALGERIA, AND FOREIGN COUNTRIES.

Number of the articles of account.	Stamp of origin.	Designation of the addressees.	Weight of each letter.	Postage to be paid to the American office on registered matter in transit.			
			Grammes.	Statement of the French exchange-office.		Verification of the American exchange-office.	
				4	5	6	
1	2	3	Number of letters.	f.	c.	f.	c.
Totals							

TABLE NO. 3.—STATEMENT OF THE QUANTITIES WHICH ARE TO SERVE AS THE BASIS OF THE ACCOUNT FOR THE RATES OF INTERMEDIARY POSTAGE BETWEEN THE POSTAL ADMINISTRATIONS OF FRANCE AND THE UNITED STATES.

Nos. of the articles of account.		Designation of the correspondence.	Statement of the French exchange-office.	Verification of the American exchange-office.
Credit of France.	Credit of the U. S.		Net weight in grammes.	Net weight in grammes.
1	2		3	4
	9	Via England..... By French packets.... By Hamburg packets.	{ Letters described in tables Nos. 1 and 2, (except those entered in the credit of France, and in article 7 of credit of U. S.) Samples and prints described in table No. 1, (except those entered to the credit of France) Letters entered in articles 12, 13, 14, 16, and 17 of the credit of France, and in article 7 of credit of U. S. Samples and prints entered in article 15 of the credit of France Letters described in tables Nos. 1 and 2, (except those entered to the credit of France, and in article 7 of U. S.) Samples and prints described in table No. 1, (except those entered to the credit of France)	
	10			
18				
19				
	11			
	12			





## 249

**F.**

Month of

*Bordereau of dead matter returned by the office of ——— to the office of ———.*

Nos. of the articles of the account in which the correspondence originally figured.	Designation of the correspondence.			No. of objects.	Sums at which the correspondence was accounted for by the office of _____ to the office of _____.	Observations.
	Origin.	Destination.	Nature.			
1	2	3	4	5	6	7
Total of sums due to the office of.....						

ADDITIONAL ARTICLE BETWEEN THE GENERAL POST-OFFICE OF THE UNITED STATES OF AMERICA AND THE GENERAL POST-OFFICE OF THE NETHERLANDS.

Whereas a regular line of direct steamers is soon to be established between the port of New York and the port of Rotterdam, which can be employed for the transportation of the Netherland-American mails at a compensation for sea-conveyance between the two frontiers not to exceed 5 cents (Dutch) or 2 cents (United States) for each single letter: Now, therefore, the undersigned, duly authorized by their respective governments, have agreed upon the following additional article to the postal convention of 26 September, 1867, and to the additional convention of 10-29 January, 1870.

SOLE ARTICLE.

The single-letter rate on correspondence exchanged directly between the two administrations by means of such steamship-line shall be as follows, viz:

- 1°. On letters from the United States, 6 cents, (United States.)
- 2°. On letters from the Netherlands, 15 cents, (Dutch.)

This additional article takes effect on the date of the dispatch of the first mail by such steamship-line, and from that date forward has the same duration as the convention of 26 September, 1867, and the additional convention of 10-29 January, 1870.

Done in duplicate and signed in Washington the fourteenth day of September, one thousand eight hundred and seventy-four, and at the Hague the nineteenth day of June, one thousand eight hundred and seventy-four.

[L. S.]

MARSHALL JEWELL,  
*Postmaster-General of the United States.*

[Translation.]

The undersigned, instructed to that end by royal decree of the 9th of June, 1874, No. 9, hereby declares it to be good and proper to confirm the foregoing agreement.

*The Minister of Finance,*  
VON DELDEN.

I hereby approve the foregoing additional article, and in testimony thereof I have caused the seal of the United States to be affixed.

[L. S.]

U. S. GRANT.

By the President:

HAMILTON FISH,  
*Secretary of State.*

WASHINGTON, 14th September, 1874.

ADDITIONAL ARTICLES OF AGREEMENT BETWEEN THE POST-OFFICE  
DEPARTMENT OF THE UNITED STATES AND THE DANISH POST DEPART-  
MENT,

modifying certain provisions of the convention for the regulation of the postal intercourse between the United States of America and the kingdom of Denmark, and of the detailed regulations and forms for the execution thereof, signed at Washington on the 1st of December, and at Copenhagen on the 7th of November, A. D. 1871.

ARTICLE I.

It being desirable that the provisions of said convention and detailed regulations shall conform to the new system of coinage to be introduced in Denmark on the 1st of January, 1875, described as the "crown coinage," under which the "crown" will be equal in value to one hundred óre, the equivalent of forty-eight Danish skilling rigsmónt of the present coinage, the following changes are hereby agreed to, viz :

1. That "twenty-five (25) óre" be substituted for "twelve (12) skilling rigsmónt" in Article 4, paragraph one, of the said convention.

2. That "twelve (12) óre" be substituted for "six (6) skilling rigsmónt" in Article 5 of the convention.

3. That "twelve (12) óre" be substituted for "six (6) skilling rigsmónt" in Article 6, paragraph one, of the convention.

4. That "sixteen (16) óre" be substituted for "eight (8) skilling rigsmónt" in Article 7, paragraph two, of the convention.

5. That "eight and one-third ( $8\frac{1}{3}$ ) óre" be substituted for "four (4) skilling rigsmónt," and "one and one-third óre" for "two-thirds skilling rigsmónt" in Article 11, paragraph one, of the convention.

6. That "three crowns and seventy-seven óre" be substituted for "one rigsdaler and eighty-five skilling rigsmónt" in Article 12, paragraph two, of the convention.

7. That "three and three-fourths ( $3\frac{3}{4}$ ) óre" be substituted for " $1\frac{1}{2}$  skilling" in Article 14 of the detailed regulations.

8. That the word "crown" be substituted for "Rd.," and "óre" for "sk.," in the forms of letter-bills and acknowledgments of receipt annexed to the detailed regulations.

ARTICLE II.

The change hereinbefore designated shall take effect on and after the 1st of January, 1875, and these additional articles of agreement shall have equal duration with the postal convention of <sup>7 November</sup><sub>1 December</sub> 1871, between the United States and Denmark.

Done at Washington, in duplicate, and signed the 29 September, 1874, and at Copenhagen the 5th of September, 1874.

J. O. VIUM.

MARSHALL JEWELL,  
*Postmaster-General of the United States.*

[L. S.]

I hereby approve the foregoing additional articles of agreement, and in testimony thereof, I have caused the seal of the United States to be affixed.

[L. S.]

U. S. GRANT.

By the President :

JOHN L. CADWALADER,  
*Acting Secretary of State.*

WASHINGTON, *September 30th*, 1874.

---

POSTAL CONVENTION BETWEEN THE EMPIRE OF JAPAN AND THE UNITED STATES OF AMERICA.

The undersigned, being thereunto duly authorized by their respective governments, have agreed upon the following articles, establishing and regulating the exchange of correspondence between the Empire of Japan and the United States of America :

ARTICLE I.

There shall be an exchange of correspondence between the United States of America and the Empire of Japan, by means of the direct line of United States mail-packets plying between San Francisco and Japan, as well as by such other means of direct mail steamship transportation between the United States and Japan, as shall hereafter be established, with the approval of the respective Post Departments of the two countries, comprising letters, newspapers, printed matter of every kind, and patterns and samples of merchandise, originating in either country, and addressed to and deliverable in the other country, as well as of correspondence of the same nature originating in or destined for foreign countries to which the United States and Japan may respectively serve as intermediaries.

ARTICLE II.

The post-office of San Francisco shall be the United States office of exchange, and Yokohama the office of exchange of the Empire of Japan, for all mails exchanged between the United States and Japan.

The two Post Departments, by agreement, may establish additional offices of exchange whenever it shall be found necessary.

ARTICLE III.

No accounts shall be kept between the Post Departments of the two countries upon the international correspondence, written or printed, exchanged between them, but each country shall retain to its own use the postages which it collects at the rates fixed by this convention.

The single rate of international letter-postage shall be fifteen cents in the United States and fifteen sen in Japan on each letter weighing fifteen grammes ( $\frac{1}{2}$  ounce) or less, and an additional rate of fifteen cents or fifteen sen for each additional weight of fifteen grammes ( $\frac{1}{2}$  ounce) or fraction thereof, which shall, in all cases, be prepaid one single rate by means of postage-stamps of the country of origin at the office of mailing in either country. Letters unpaid, or prepaid less than one full rate of postage, shall not be forwarded, but insufficiently-paid letters, on which a single rate or more has been prepaid, shall be forwarded, charged with the deficient postage, to be collected and retained by the Post De-

partment of the country of destination. Letters fully prepaid, received in either country from the other, shall be delivered free of all charge whatsoever.

It is, however, formally agreed that the single rate of international letter-postage shall be reduced to twelve cents in the United States and to twelve sen in Japan, at the expiration of twelve months from the date of carrying this convention into effect.

The United States post-office shall levy and collect to its own use, on newspapers addressed to or received from Japan, a postage-charge of two cents, and on all other articles of printed matter, patterns and samples of merchandize addressed to or received from Japan, a postage-charge of two cents for each weight of two ounces or fraction of two ounces.

The post-office of Japan shall levy and collect to its own use on newspapers and other articles of printed matter, patterns and samples of merchandize addressed to or received from the United States, the regular rates of Japanese domestic postage chargeable thereon by the laws and regulations of the Empire of Japan.

Newspapers and all other kinds of printed matter, patterns and samples of merchandise, shall be subject to the laws and regulations of each country respectively, prescribing the conditions of their publication and circulation, and also with regard to their liability to be rated with letter-postage when containing written matter, or for any other cause specified in said laws and regulations, as well as in regard to their liability to customs duty under the revenue laws of either country.

#### ARTICLE IV.

Every international letter insufficiently paid, received in the United States from Japan shall, in addition to the deficient postage, be subject to a fine of six cents, to be retained by the United States post-office; and every international letter insufficiently paid, received in Japan from the United States, shall, in addition to the deficient postage, be subject to a fine of six sen, such fine to be retained by the Japanese post-office.

#### ARTICLE V.

There shall be an exchange of correspondence between the Japanese post-offices of Yokohama, Hiogo and Nagasaki, and the United States postal agency at Shanghai, China, by means of United States or Japanese mail-packets plying regularly on the route between the ports of Japan and Shanghai, comprising letters, newspapers, printed matter of every kind, patterns and samples of merchandise, originating in Japan and addressed to Shanghai, or originating in Shanghai and addressed to Japan. The correspondence so forwarded in either direction between Japan and Shanghai shall give rise to no accounts between the two Post Departments, but each shall levy, collect, and retain to its own use the following postage-rates on the correspondence which it forwards to the other, the same to be in full of all charges to destination.

On correspondence from Shanghai for Japan, there shall be levied and collected at the United States Postal Agency at Shanghai, a postage of six cents per each single rate of half an ounce or under on letters, two cents each on newspapers and prices-current, and two cents per each weight of two ounces or fraction of two ounces on other articles of printed matter, patterns or samples of merchandise.

On correspondence from Japan for Shanghai, there shall be levied and collected at the office of mailing in Japan, a postage of six sen per each single rate of fifteen grammes or under on letters, and the established rates of Japanese domestic postage on other articles of printed matter, patterns or samples of merchandise.

Correspondence not fully prepaid to destination at the rates fixed by this article will not be forwarded.

#### ARTICLE VI.

Each country grants to the other the privilege of transit of closed mails exchanged in either direction between the latter and any country to which the other may serve as an intermediary, by its usual means of mail transportation, whether on sea or land.

The rates of postage to be paid by the Japanese Post Department to the United States Post Department for the territorial, or territorial and sea transit, of all correspondence in closed mails, sent or received through the United States for or from countries or places beyond, shall be as follows :

(1.) On closed mails, either for or from Mexico, British Columbia, Canada, and other British North American Provinces, when transmitted entirely by land-routes, six cents per thirty grammes for letter-mails, and thirty-two cents per kilogramme for all kinds of printed matter, patterns and samples of merchandise.

(2.) On closed mails either for or from British Columbia, or other British North American Provinces, Mexico, Central and South America, or the West India Islands, when transported to or from the United States by sea, twenty-five cents per thirty grammes for letter-mails, and forty cents per kilogramme for printed matter of all kinds, patterns and samples.

(3.) On closed mails either for or from Great Britain, Germany, and other countries of Europe, the same rates of territorial and sea postage as those established by the postal conventions between the United States and each of those countries respectively.

The rates of postage to be paid by the United States Post-Office to the Japanese Post-Office for the territorial, or territorial and sea transit of correspondence in closed mails sent through Japan for transmission to or from countries and places beyond, shall be agreed upon between the two Post Departments when the exercise of the privilege is required.

The country which sends or receives closed mails through the other shall render an account of the letters, newspapers, book-packets, and patterns contained in such closed mails.

#### ARTICLE VII.

The two Post Departments of the United States and Japan shall establish, by agreement, and in conformity with the arrangements in force at the time, the conditions upon which the two offices may reciprocally exchange, in open mails, the correspondence originating in or destined for foreign countries to which they may respectively serve as intermediaries.

It is always understood, however, that such correspondence shall only be charged with the rates applicable to direct international correspondence, augmented by the postage due to foreign countries, or by any other tax for exterior service.



## ARTICLE VIII.

The United States Post-Office shall account to the Japanese Post-Office for the sum of two cents upon every single-paid letter from foreign countries sent through the United States in ordinary mails and prepaid to destination in Japan.

## ARTICLE IX.

All passengers' letters sent back to the United States by passing mail steamers on the high seas, shall be paid in full, at ten cents per single rate, with United States postage-stamps; and all passengers' letters sent back to Japan by passing mail-steamers on the high seas, shall be paid in full at ten sen per single rate, with Japanese postage-stamps.

## ARTICLE X.

The sea-postage for the conveyance across the Pacific Ocean of correspondence in open or closed mails, exchanged under the provisions of this convention, shall be computed at six cents per ounce or six sen per thirty grammes (net weight) on letter-mails, and six cents per pound or six sen per four hundred and eighty grammes (net weight) on other correspondence.

## ARTICLE XI.

Letter-bills shall accompany each mail from one country to the other, containing an account of the weight of each class of correspondence, both international and transit; and the accounts arising between the two offices on the different classes of transit correspondence shall be stated, adjusted, and settled quarterly, and the balance found due on such correspondence shall be promptly paid over by the debtor office to the creditor office in such manner as the creditor office may desire.

## ARTICLE XII.

So long as the Government of the United States shall maintain, at its own expense, the existing line of semi-monthly mail-steamers between San Francisco and Yokohama, it is mutually agreed that the Government of Japan shall defray the entire expenses of the sea transportation of all correspondence which shall be transmitted in either direction by any other line of mail-steamers plying between the sea-ports of the two countries.

## ARTICLE XIII.

When in any port of either country a closed mail is transferred from one vessel to another, without any expense to the office of the country where the transfer is made, such transfer shall not be subject to any postal charge by one office against the other.

## ARTICLE XIV.

Official communications, addressed by the United States Post-Office to the Japanese Post-Office, or by the Japanese Post Office to the United States Post-Office, shall not give rise to any account between the two offices.

## ARTICLE XV.

The official correspondence between each government and its legation near the other shall be conveyed to its destination free of postage, and with all the precaution which the two Governments may find necessary for its inviolability and security.

## ARTICLE XVI.

The two Post Departments may, by mutual agreement, provide for the transmission of registered articles in the mails exchanged between the two countries.

The register-fee on each registered article shall be ten cents in the United States and fifteen sen in Japan, and the ordinary postage thereon, as well as the register-fee, must always be fully prepaid.

Each office is at liberty to regulate this fee for the registered articles it dispatches.

## ARTICLE XVII.

The two Post Departments shall settle by agreement between them all matters of detail and arrangement required to carry this convention into execution, and may modify the same in like manner, from time to time, as the exigencies of the service may require.

## ARTICLE XVIII.

Every fully prepaid letter dispatched from one country to the other shall be plainly stamped with the words "*paid all,*" in red ink, on the upper right-hand corner of the address, in addition to the date-stamp of the office at which it was posted; and on insufficiently-paid letters the amount of the deficient postage shall be inscribed in black ink.

## ARTICLE XIX.

Dead letters which cannot be delivered, from whatever cause, shall be mutually returned without charge, monthly, or as frequently as the regulations of the respective offices will permit.

## ARTICLE XX.

In converting Japanese currency into United States currency, or United States currency into Japanese currency, the United States dollar shall be considered the equivalent of the Japanese yen, and the United States cent as the equivalent of the Japanese sen.

## ARTICLE XXI.

The United States post-office agrees that, upon a notice of six months being given by the Japanese post-office, at any time after the ratification of this Convention, the United States Postal Agency at Yokohama and all other United States Postal Agencies that are now, or that may hereafter be established within the limits of Japan, shall be discontinued.

## ARTICLE XXII.

This convention shall go into effect upon the day on which the Postal Agencies of the United States in Japan shall be discontinued.

## ARTICLE XXIII.

This convention shall be terminable at any time, on a notice by either office of one year. It is to be ratified and the ratifications are to be exchanged as soon as possible.

Done in duplicate original at the city of Washington, this 6th day of August, in the year of our Lord one thousand eight hundred and seventy-three, or the sixth day of the eighth month of the sixth year of Meiji.

[SEAL.]

SAMRO TAKAKI,  
*His Imperial Japanese Majesty's Chargé d'Affaires, ad interim,*  
*to the United States of America.*

[SEAL.]

JNO. A. J. CRESWELL,  
*Postmaster-General of the United States.*

I hereby approve the foregoing convention, and in testimony thereof I have caused the seal of the United States to be affixed.

[SEAL.]

U. S. GRANT.

By the President :

HAMILTON FISH,  
*Secretary of State.*

WASHINGTON, August 6th, 1873.

[Translation.]

I hereby approve the foregoing convention, and in testimony thereof I have caused the seal of the empire to be affixed.

[IMPERIAL SEAL.]

MUTSU HITO.

By order of His Majesty :

TERASHIMA MUNENORI,  
*His Imperial Japanese Majesty's Minister for Foreign Affairs.*

The 7th of 2d month, 7th year Meiji.

We, John A. J. Creswell, Postmaster-General of the United States, and Mr. Giro Yano, chargé d'affaires, *ad interim*, of Japan to the United States, certify that on this date we have proceeded to perform the exchange of ratifications of the Postal Convention which was concluded between the United States of America and the Empire of Japan, at Washington, on the 6th day of August, in the year of our Lord one thousand eight hundred and seventy-three, or the 6th day of the eighth month of the sixth year of Meiji.

Done in duplicate and signed at Washington this 18th day of April, A. D. 1874, or the 18th day of the fourth month of the seventh year of Meiji.

[SEAL.]

JNO. A. J. CRESWELL,  
*Postmaster-General of the United States.*

[SEAL.]

GIRO YANO,  
*Chargé d'Affaires, ad interim, of Japan.*

*Detailed regulations for the execution of the postal convention between the United States and the Empire of Japan, concluded on the 6th of August, 1873.*

For the purpose of carrying into operation the postal convention concluded on the 6th of August, 1873, between the United States of America and the Empire of Japan, and in pursuance of Article 17 of said convention, the following detailed regulations have been agreed upon between the two Post-Office Departments :

#### ARTICLE I.

Each mail exchanged between the respective exchange-offices shall be accompanied by a letter-bill following the Form A hereto annexed, and the receipt of each mail shall be acknowledged by the receiving-office by the next dispatch, in accordance with the form of acknowledgments of receipt hereto annexed, marked B.

Each mail exchanged between the United States postal agency at Shanghai and the Japanese post-offices of Yokohama, Hiogo, and Nagasaki, respectively, shall be accompanied by a letter-bill following the Form C, hereto annexed ; its receipt shall be acknowledged by the next dispatch, in accordance with the Form D, hereto annexed.

#### ARTICLE II.

The correspondence dispatched from each exchange-office shall be made up in separate packages corresponding with the entries on the letter-bill. Each of these packages shall be wrapped in strong paper, tied with twine, and shall bear a label indicating the nature of the correspondence in English characters.

#### ARTICLE III.

The registered letters dispatched shall be described in a registered-letter list, following the model E, hereto annexed, and the total number of registered letters sent shall be entered in the corresponding blank on the letter-bill.

In case no registered articles are sent, the proper blank of the letter-bill shall be filled with the word "Nihil," or "Nil."

The package of registered letters sent in the mail shall be plainly inscribed with the word "Registered."

#### ARTICLE IV.

All letters exchanged in the mail shall bear the stamp of the office of origin and the date of mailing, and also the stamp of the exchange-office dispatching them.

Insufficiently-prepaid letters shall bear the stamp "Insufficiently-prepaid," and registered letters shall bear the stamp "Registered."

#### ARTICLE V.

In conformity with the requirements of Article VII of the convention, a table, F, is hereto annexed, showing the countries with which, and specifying the terms and conditions on which, Japan may exchange correspondence in the open mail through the United States.

## ARTICLE VI.

The United States exchange-office shall mark in *black ink* in the upper left corner of the address of unpaid letters passing in transit through the United States, the amount of postage for exterior service due the United States on such letters, and, in like manner, but in *red ink*, shall mark on letters passing in transit through the United States prepaid to Japan, the amount due the Japanese office on such letters.

## ARTICLE VII.

The accounts arising from the extranational correspondence shall be prepaid quarterly by the United States administration, shall be based upon the acknowledgments of receipt, and shall be promptly forwarded to the Japanese office for examination.

The amount found due shall be paid by the debtor to the creditor office in the money of the country of the creditor office.

## ARTICLE VIII.

All correspondence wrongly addressed or missent shall be returned without delay by the receiving-office to the exchange-office which dispatched it.

## ARTICLE IX.

The dispatching exchange-office shall state on the letter-bills to the intermediate exchange-offices the exact number of single rates of letters, or weight, if required, and the total weight of the other correspondence which shall be dispatched in closed mails.

Done in duplicate and signed in Washington on the 15th day of July, 1874.

[SEAL.]

J. W. MARSHALL,  
*Postmaster-General.*

[SEAL.]

GIRO YANO,  
*His Imperial Japanese Majesty's Charge d'Affaires ad interim.*

POST-OFFICE DEPARTMENT  
OF THE UNITED STATES. }

A.

{ CORRESPONDENCE WITH  
JAPAN.

LETTER-BILL NO. —.

For the mail from San Francisco to Yokohama, sent the ———, by the steamer ———.

	Statement by the despatching exchange office.		Verification by the receiving exchange office.	
	No. of single rates.	Total weight, grams.	No. of single rates.	Total weight, grams.
TABLE I.— <i>International correspondences.</i>				
1. Letters, (ordinary and registered) .....				
2. Other correspondence .....				
TABLE II.— <i>Extranational correspondences.</i>	No. of single rates.	Amount.	No. of single rates.	Amount.
3. Prepaid letters, ordinary and registered, from countries beyond the United States addressed to Japan .....				
Amount due Japan at 2 cents a rate .....				
4. Unpaid letters from countries beyond the United States addressed to Japan .....				
Amount due United States for extranational service .....				

Total weight of the mail:  
Letters, ——— grams.  
Newspapers, ——— grams.

TABLE III.—*Registered Letters.*

Total number of registered letters sent in this mail:  
International.....  
Extranational.....

TABLE IV.—*Closed Mails.*

From —	To—	Number of bags.	Weight.	
			Letters, grams.	Printed matter, &c., grams.

\_\_\_\_\_,  
Postmaster at San Francisco.

POST-OFFICE DEPARTMENT  
OF THE UNITED STATES.

B.

CORRESPONDENCE  
WITH JAPAN.

ACKNOWLEDGMENT OF RECEIPT.

For the mail sent from Yokohama to San Francisco on the \_\_\_\_\_, by the steamer \_\_\_\_\_,  
received the \_\_\_\_\_.

	Statement by the despatching exchange-office.		Verification by the receiving exchange-office.	
	Single rates.	Total weight.	Single rates.	Total weight.
TABLE I.— <i>International correspondence.</i>		gr.		gr.
1. Letters, (ordinary and registered).....	—	—	—	—
2. Other correspondence .....	—	—	—	—
TABLE II.— <i>Extranational correspondence.</i>	Single rates.	Amount.	Single rates.	Amount.
3. Prepaid letters from Japan addressed to countries beyond the U. S.....				
Amount due United States for extranational service .....				

Total weight of the mail:  
Letters, \_\_\_\_\_ grams.  
Prints, &c., \_\_\_\_\_ grams.

TABLE III.—*Registered Letters.*

Total number of registered letters received in the mail:  
International.....  
Extranational.....  
Amount of fees due the U. S. on extranational registered letters ..... \$ Cts.

TABLE IV.—*Closed Mails.*

From—	To—	Number of bags.	Weight.	
			Letters, grams.	Printed matter, &c., grams.

\_\_\_\_\_,  
Postmaster at San Francisco.



POST-OFFICE DEPARTMENT  
OF THE UNITED STATES.  
POSTAL AGENCY AT SHANG-  
HAI.

C.—LETTER-BILL No. —.

CORRESPONDENCE WITH  
JAPAN.

For the mail from Shanghai for ———, sent the ———, by the steamer ———.

The following are the contents of the mail:

Letters .....	{ No. of single rates .....
	{ Amount prepaid, \$ .....
Newspapers .....	{ Total weight, gr .....
	{ Amount prepaid, \$ .....

POST-OFFICE DEPARTMENT  
OF THE UNITED STATES.  
POSTAL AGENCY AT SHANG-  
HAI.

D.—ACKNOWLEDGMENT  
OF RECEIPT.

CORRESPONDENCE WITH  
JAPAN.

The mail sent from ——— to Shanghai on the ———, by the ———, was received on the ———, and contained the following:

Letters .....	{ No. of single rates .....
	{ Amount prepaid .....
Newspapers, &c. ....	{ Total weight .....
	{ Amount prepaid .....

POST-OFFICE DEPARTMENT  
OF THE UNITED STATES. }

E.

{ CORRESPONDENCE WITH  
JAPAN.

REGISTERED-LETTER LIST.

For the mail sent by the San Francisco office to the Yokohama office, the ———, 18—.

No.	Nature of the registered articles.	Origin.	To whom addressed.	Destination.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

Total number of the registered articles to be carried to Table III of the letter-bill —

Certified by—  
\_\_\_\_\_

Verified by  
\_\_\_\_\_

## F.

Table showing the countries to which, and the terms and conditions on which, Japan may forward letters, newspapers, and prints of all kinds through the ordinary mails of the United States.

Countries.	Letters.		Newspapers.	Prints of all other descriptions.				
	For each ½ ounce or under.	Fee for registration.	For each not exceeding 4 ounces in weight.	Not exceeding 1 ounce in weight.	Exceeding 1 but not exceeding 2 ounces in weight.	Exceeding 2 but not exceeding 4 ounces in weight.	For every additional 4 ounces or fraction thereof.	
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	
Australia, except New South Wales, via San Francisco.	10		2	*				
Austria, via Bremen or Hamburg	6	8	3	2	4	6	6	P.
Austria, via Cologne	7	8	4	3	6	8	8	P.
Bahamas	3		2	*				
Belgium	8	8	4			8	8	P.
Elize, (British Honduras)	18	8	4			10	10	
Bermuda	10		2	*				
Bolivia	22	8	4			10	10	
Brazil	15	10	2	*				
British Columbia	6	5	2	*				
Canada	6	5	2	*				
Chili	22	8	4			10	10	
Costa Rica	10		2	*				
Cuba	10		2	*				
Denmark	7	8	4	3	6	8	8	P.
Dominica	10		2	*				
Ecuador	20		2	*				
Egypt, via Bremen or Hamburg	16	8	9	4	8	12	12	
France, via direct steamer	10		2	*				
Germany, via Bremen or Hamburg	6	8	2	2	4	6	6	P.
Germany, via Cologne	7	8	3	3	6	8	8	P.
Gibraltar	16	16	4	4	8	12	12	
Great Britain and Ireland	6	8	2	2	4	6	6	P.
Greece, via Bremen or Hamburg	14	8	9	8	10	12	12	
Guatemala	10		2	*				
Haiti	10		2	*				
Holland	10	8	4			8	8	P.
Italy	10	8	4			8	8	P.
Malta	16	16	4	4	8	12	12	
Mexico	10		2	*				
Newfoundland	6	5	2	*				
New South Wales	12	10	2			4	4	
New Zealand	12	10	2			4	4	
Nicaragua	10		2	*				
Norway	10	8	4	4	6	8	8	P.
Peru	22	8	4			10	10	
Portugal, via Bremen or Hamburg	11	8	6	3	6	9	9	
Prince Edward Island	6	5	2	*				
Salvador	10		2	*				
Sandwich Islands	6		2			4	4	
Spain, via Bremen or Hamburg	11		6	3	6	9	9	
Sweden	9	8	4	4	6	8	8	P.
Switzerland	8	8	3	2	4	6	6	P.
Turkey, via Bremen or Hamburg	11	8	7	6	8	10	10	
Venezuela	10		2	*				
West Indies, (Danish)	10		2	*				
West Indies, not hereinbefore named	18	8	4			10	10	P.

The asterisk (\*) indicates that the postage on prints other than newspapers is 2 cents per 2 ounces or fraction thereof.

The letter P in the last column indicates that patterns and samples may be sent at the rates given for prints of all other descriptions.

*Total operations of the appointment office for the year ended June 30, 1874.*

States and Territories.	Post-offices.				Postmasters.			Total number of changes.
	Established.	Discontinued.	Names, and sites changed.	Appointments on changes of name and site.	Resigned and commissions expired.	Removed.	Deceased.	
Alabama.....	118	59	17	6	127	30	5	
Alaska.....	2	1						
Arizona.....	3	6	1	1	8			
Arkansas.....	66	89	6	1	141	30	9	
California.....	72	19	10	2	83	17	6	
Colorado.....	29	7	7	3	49	4		
Connecticut.....	11	3	3	1	54	4	3	
Dakota.....	27	14	8	6	29	2		
Delaware.....	1	2			4			
District of Columbia.....					1	1		
Florida.....	30	36	5	2	23	10	2	
Georgia.....	90	21	9		124	19	3	
Idaho.....	19	6	1	1	11	1		
Illinois.....	95	57	27	8	296	40	14	
Indiana.....	59	26	10	2	305	36	14	
Iowa.....	62	39	14	6	277	30	13	
Kansas.....	139	45	35	26	218	37	2	
Kentucky.....	92	70	8	5	175	47	7	
Louisiana.....	30	31	5	1	65	30	5	
Maine.....	17	5	8	8	81	8	9	
Maryland.....	26	14	12	8	93	13	9	
Massachusetts.....	26	3	6	1	81	8	5	
Michigan.....	79	39	18	9	161	48	13	
Minnesota.....	67	28	13	9	102	36	4	
Mississippi.....	60	23	4	1	126	25	7	
Missouri.....	59	64	19	13	296	27	21	
Montana.....	11	18	1	1	19	2		
Nebraska.....	92	20	27	20	115	21	4	
Nevada.....	10	6	4	1	20	4	2	
New Hampshire.....	7	1	7	4	40	8	3	
New Jersey.....	19	10	3	1	45	10	4	
New Mexico.....	12	5			14	3	1	
New York.....	38	31	21	10	236	79	25	
North Carolina.....	127	54	18	7	167	33	12	
Ohio.....	72	59	16	6	307	30	33	
Oregon.....	25	20	2	2	59	4		
Pennsylvania.....	78	45	48	17	361	33	39	
Rhode Island.....	3	7			9	1	1	
South Carolina.....	41	30	3	2	60	4	3	
Tennessee.....	92	50	14	7	151	38	11	
Texas.....	129	60	12	7	227	54	16	
Utah.....	10	12	8		19	2	2	
Vermont.....	10	3	2	2	46	2	5	
Virginia.....	132	63	12	5	234	29	19	
Washington.....	24	12	7	4	40	6	3	
West Virginia.....	36	18	10	6	99	17	5	
Wisconsin.....	62	29	14	1	145	18	11	
Wyoming.....	9	8	2		11	4		
Total.....	2,318	1,268	477	223	5,354	907	36	

Table showing the increase and decrease of post-offices in the several States and Territories ; also the number of post-offices at which appointments are made by the President and by the Postmaster-General, for the year ended June 30, 1874.

States and Territories.	Whole number of post-offices in the United States June 30, 1873.	Whole number of post-offices in the United States June 30, 1874.	Increase.	Decrease.	Number of postmasters appointed by the President June 30, 1873.	Number of postmasters appointed by the President June 30, 1874.	Increase.	Decrease.	Number of postmasters appointed by the Postmaster-General June 30, 1873.	Number of postmasters appointed by the Postmaster-General June 30, 1874.	Increase.	Decrease.
Alabama.....	687	746	59	.....	14	14	.....	.....	673	732	59	.....
Alaska.....	3	4	1	.....	.....	.....	.....	.....	3	4	1	.....
Arizona.....	37	34	.....	3	1	2	1	.....	36	32	.....	4
Arkansas.....	625	602	.....	23	5	7	2	.....	620	595	.....	25
California.....	630	683	53	.....	23	24	1	.....	607	659	52	.....
Colorado.....	145	167	22	.....	9	8	.....	1	136	159	23	.....
Connecticut.....	422	436	8	.....	41	41	.....	.....	387	395	8	.....
Dakota.....	99	112	13	.....	2	2	.....	.....	97	110	13	.....
Delaware.....	102	101	.....	1	4	4	.....	.....	98	97	.....	1
District of Columbia	5	5	.....	.....	2	2	.....	.....	3	3	.....	.....
Florida.....	187	181	.....	6	6	6	.....	.....	181	175	.....	6
Georgia.....	587	656	69	.....	22	22	.....	.....	565	634	69	.....
Idaho.....	53	66	13	.....	2	2	.....	.....	51	64	13	.....
Illinois.....	1,792	1,830	38	.....	122	127	5	.....	1,670	1,703	33	.....
Indiana.....	1,445	1,478	33	.....	57	57	.....	.....	1,388	1,421	33	.....
Iowa.....	1,314	1,337	23	.....	65	66	1	.....	1,249	1,271	22	.....
Kansas.....	887	981	94	.....	33	34	1	.....	854	947	93	.....
Kentucky.....	1,009	1,031	22	.....	24	24	.....	.....	985	1,007	22	.....
Louisiana.....	319	318	.....	1	7	7	.....	.....	312	311	.....	1
Maine.....	845	857	12	.....	24	23	.....	1	821	834	13	.....
Maryland.....	569	581	12	.....	12	12	.....	.....	557	569	12	.....
Massachusetts.....	699	722	23	.....	102	102	.....	.....	597	620	23	.....
Michigan.....	1,128	1,168	40	.....	63	68	5	.....	1,065	1,100	35	.....
Minnesota.....	744	783	39	.....	19	18	.....	1	725	765	40	.....
Mississippi.....	500	537	37	.....	22	23	1	.....	478	514	36	.....
Missouri.....	1,454	1,449	.....	5	44	46	2	.....	1,410	1,403	.....	7
Montana.....	101	94	.....	7	4	4	.....	.....	97	90	.....	7
Nebraska.....	429	501	72	.....	8	10	2	.....	421	491	70	.....
Nevada.....	82	86	4	.....	8	10	2	.....	74	76	2	.....
New Hampshire.....	421	427	6	.....	24	24	.....	.....	397	403	6	.....
New Jersey.....	626	635	9	.....	44	46	2	.....	582	589	7	.....
New Mexico.....	48	55	7	.....	2	2	.....	.....	46	53	7	.....
New York.....	2,794	2,801	7	.....	152	156	4	.....	2,642	2,645	3	.....
North Carolina.....	897	970	73	.....	10	12	2	.....	887	958	71	.....
Ohio.....	2,127	2,140	13	.....	100	100	.....	.....	2,027	2,040	13	.....
Oregon.....	239	244	5	.....	5	5	.....	.....	234	239	5	.....
Pennsylvania.....	3,039	3,072	33	.....	116	120	4	.....	2,923	2,952	29	.....
Rhode Island.....	107	103	.....	4	10	10	.....	.....	97	93	.....	4
South Carolina.....	420	431	11	.....	13	13	.....	.....	407	418	11	.....
Tennessee.....	947	989	42	.....	17	17	.....	.....	930	972	42	.....
Texas.....	749	818	69	.....	25	30	5	.....	724	788	64	.....
Utah.....	168	166	.....	2	3	3	.....	.....	165	163	.....	2
Vermont.....	475	482	7	.....	19	19	.....	.....	456	463	7	.....
Virginia.....	1,270	1,339	69	.....	21	22	1	.....	1,249	1,317	68	.....
Washington.....	126	138	12	.....	2	3	1	.....	124	135	11	.....
West Virginia.....	696	714	18	.....	8	10	2	.....	688	704	16	.....
Wisconsin.....	1,157	1,190	33	.....	45	49	4	.....	1,112	1,141	29	.....
Wyoming.....	33	34	1	.....	2	2	.....	.....	31	32	1	.....
Total.....	33,244	34,294	1,052	52	1,363	1,408	45	3	31,881	32,886	1,005	5

## Statement of the operations of the free-delivery

Name of post-office.	Number of carriers.	Delivered.					Collected.	
		Mail.		Local.		Newspapers.	Letters.	Postal cards.
		Letters.	Postal cards.	Letters.	Postal cards.			
Albany, N. Y.....	25	2, 736, 684	129, 057	231, 711	86, 825	876, 651	2, 330, 692	111, 37
Allegheny, Pa.....	9	833, 241	46, 780	72, 720	16, 586	495, 720	391, 168	31, 15
Atlanta, Ga.....	5	396, 705	31, 729	19, 934	10, 425	123, 774	319, 357	30, 00
Baltimore, Md.....	60	5, 238, 979	274, 141	699, 570	325, 432	1, 361, 530	4, 549, 463	535, 94
Bangor, Me.....	5	64, 756	6, 126	4, 006	846	35, 514	104, 947	14, 30
Bloomington, Ill...	5	219, 345	31, 729	21, 269	6, 573	136, 932	98, 645	22, 34
Boston, Mass.....	134	10, 060, 284	789, 211	3, 425, 220	707, 103	3, 423, 647	15, 148, 014	1, 347, 44
Brooklyn, N. Y....	86	3, 836, 856	353, 305	781, 265	243, 582	1, 934, 768	2, 201, 528	291, 31
Buffalo, N. Y.....	34	3, 129, 889	178, 189	411, 653	144, 631	1, 352, 866	2, 271, 148	234, 44
Burlington, Iowa..	6	164, 810	18, 167	15, 639	3, 891	136, 352	138, 403	16, 70
Camden, N. J.....	6	248, 481	21, 989	26, 950	9, 840	110, 423	116, 023	10, 70
Charleston, S. C...	8	275, 419	22, 382	25, 610	11, 830	117, 867	307, 209	29, 12
Chicago, Ill.....	144	15, 544, 018	1, 404, 770	2, 893, 270	529, 230	3, 612, 106	27, 655, 325	2, 435, 07
Cincinnati, Ohio...	53	4, 797, 694	227, 598	918, 959	151, 165	1, 074, 001	3, 509, 764	206, 00
Cleveland, Ohio...	31	3, 136, 557	298, 232	379, 238	125, 338	1, 186, 433	2, 317, 947	30, 00
Columbus, Ohio...	10	639, 761	61, 800	48, 872	20, 878	316, 298	458, 964	80, 00
Covington, Ky.....	4	210, 567	13, 176	12, 641	4, 051	95, 745	91, 684	10, 00
Davenport, Iowa..	7	192, 632	30, 250	17, 564	7, 567	141, 393	173, 791	31, 30
Dayton, Ohio.....	12	960, 813	88, 910	81, 173	32, 504	496, 834	781, 493	133, 70
Des Moines, Iowa..	6	315, 305	32, 861	30, 574	8, 135	200, 734	262, 142	21, 00
Detroit, Mich.....	31	4, 032, 678	325, 470	362, 429	95, 880	1, 621, 314	2, 074, 934	42, 00
Dubuque, Iowa...	5	261, 224	31, 113	13, 135	4, 813	184, 034	262, 917	4, 00
Easton, Pa.....	6	284, 076	24, 778	24, 742	4, 371	115, 225	182, 433	2, 00
Elizabeth, N. J....	6	356, 720	29, 814	53, 669	8, 813	200, 239	182, 251	19, 00
Elmira, N. Y.....	5	308, 829	33, 702	31, 534	5, 609	108, 461	157, 624	24, 00
Erie, Pa.....	7	560, 975	18, 428	44, 995	16, 315	420, 229	264, 187	10, 00
Evansville, Ind....	6	427, 805	40, 188	19, 249	11, 421	286, 606	302, 255	24, 00
Fall River, Mass..	8	225, 950	10, 752	204, 434	3, 676	145, 896	129, 884	00, 00
Fort Wayne, Ind...	6	593, 141	38, 118	73, 401	29, 626	358, 833	516, 529	70, 00
Grand Rapids, Mich	6	654, 650	77, 091	66, 642	13, 860	238, 205	356, 007	4, 00
Harrisburgh, Pa...	5	380, 717	22, 370	22, 496	4, 032	248, 266	144, 914	00, 00
Hartford, Conn....	11	960, 334	45, 138	142, 172	23, 684	448, 491	579, 964	30, 00
Hoboken, N. J.....	4	100, 173	12, 622	8, 679	4, 978	36, 382	33, 617	00, 00
Indianapolis, Ind..	26	2, 200, 959	178, 052	210, 384	82, 518	787, 720	1, 464, 009	27, 00
Jersey City, N. J..	14	1, 024, 392	37, 539	108, 702	21, 319	7, 728	404, 406	00, 00
Kansas City, Mo...	9	823, 312	74, 891	66, 998	16, 678	522, 904	489, 189	00, 00
La Fayette, Ind...	4	207, 015	24, 527	8, 943	1, 777	144, 710	119, 700	10, 00
Lancaster, Pa.....	6	419, 467	41, 407	24, 352	10, 128	185, 253	117, 831	10, 00
Lawrence, Mass...	8	635, 452	24, 211	39, 497	19, 187	435, 701	651, 908	00, 00
Leavenworth, Kans	5	160, 991	19, 272	10, 479	8, 019	105, 025	183, 694	10, 00
Louisville, Ky.....	26	2, 910, 550	191, 366	264, 923	133, 216	847, 029	1, 709, 429	15, 00
Lowell, Mass.....	8	640, 350	16, 571	45, 635	11, 470	266, 254	723, 621	10, 00
Lynn, Mass.....	7	502, 381	28, 436	37, 345	12, 900	244, 444	373, 283	20, 00
Manchester, N. H..	7	527, 528	33, 992	25, 088	14, 511	348, 659	270, 966	20, 00
Memphis, Tenn....	12	1, 376, 349	34, 683	107, 502	24, 722	309, 307	922, 873	00, 00
Milwaukee, Wis...	24	2, 668, 313	157, 591	176, 835	83, 332	662, 697	1, 417, 021	16, 00
Minneapolis, Minn.	7	351, 628	27, 115	29, 398	15, 062	356, 535	252, 254	00, 00
Mobile, Ala.....	7	166, 577	12, 151	13, 232	1, 515	114, 390	304, 138	00, 00
Nashville, Tenn...	11	997, 983	56, 201	79, 668	17, 549	409, 041	549, 400	00, 00
Newark, N. J.....	21	1, 745, 247	158, 156	379, 859	123, 874	776, 316	1, 038, 101	12, 00
New Bedford, Mass	6	601, 206	12, 416	32, 346	7, 217	305, 924	276, 367	00, 00
New Haven, Conn...	11	700, 161	39, 316	121, 872	13, 721	381, 532	512, 631	00, 00
New Orleans, La...	45	2, 215, 457	194, 240	346, 315	175, 698	1, 027, 782	3, 105, 530	23, 00
New York, N. Y...	379	32, 638, 200	1, 476, 138	19, 524, 001	2, 527, 625	7, 070, 690	50, 316, 191	1, 500, 00
Norfolk, Va.....	6	262, 137	32, 125	18, 893	9, 255	88, 428	348, 082	00, 00
Omaha, Nebr.....	6	412, 323	20, 879	53, 113	3, 390	198, 801	325, 519	00, 00
Oswego, N. Y.....	6	258, 955	26, 568	12, 198	6, 186	114, 391	188, 547	00, 00
Paterson, N. J....	8	351, 501	14, 904	39, 763	5, 788	196, 559	189, 906	00, 00
Peoria, Ill.....	8	409, 221	45, 386	26, 032	10, 839	161, 567	324, 155	00, 00
Petersburgh, Va...	5	117, 118	10, 261	5, 031	615	51, 272	74, 412	00, 00
Philadelphia, Pa...	207	16, 086, 890	1, 199, 930	8, 324, 786	1, 565, 181	6, 319, 664	19, 608, 115	2, 000, 00
Pittsburgh, Pa....	24	2, 060, 363	136, 425	318, 281	94, 161	825, 900	1, 689, 276	10, 00
Portland, Me.....	10	595, 111	32, 824	42, 758	14, 682	414, 877	781, 636	00, 00
Pottsville, Pa....	4	114, 985	11, 546	10, 007	2, 315	85, 144	68, 165	00, 00
Poughkeepsie, N. Y	4	211, 849	14, 498	25, 391	9, 750	89, 508	229, 974	00, 00
Providence, R. I...	15	996, 343	36, 012	215, 868	18, 128	466, 776	458, 761	00, 00
Quincy, Ill.....	7	358, 618	33, 016	32, 128	8, 627	282, 995	244, 979	00, 00
Reading, Pa.....	8	429, 457	38, 360	47, 498	15, 075	267, 419	271, 385	00, 00
Richmond, Va.....	16	1, 157, 651	100, 936	80, 955	30, 285	415, 991	701, 255	00, 00
Rochester, N. Y...	20	2, 563, 050	99, 724	244, 776	84, 532	1, 239, 604	1, 647, 291	10, 00
Saint Joseph, Mo...	6	235, 151	22, 826	15, 747	8, 181	175, 059	184, 299	00, 00
Saint Louis, Mo...	100	9, 998, 490	625, 836	942, 197	535, 806	2, 135, 771	5, 481, 359	00, 00

system for the year ended June 30, 1874.

Newspapers.	Pieces handled.		Cost of service.			Amount of local postage.	Remarks.
	Aggregate.	Per carrier.	Aggregate, including incidentals.	Per piece.	Per carrier.		
				Mills.			
185,838	6,688,835	267,553	\$22,207 58	3.3	\$888 30	\$7,879 89	
31,184	1,918,633	213,181	7,560 93	3.9	840 10	5,598 87	
29,012	961,816	192,363	3,416 92	3.5	683 38	1,079 92	Established July 1, 1873.
257,670	13,262,134	221,035	59,906 10	4.5	998 43	23,765 60	
6,983	237,387	47,477	1,393 25	5.8	278 65	255 25	Established Feb. 1, 1874.
8,974	545,771	109,154	2,806 68	5.1	561 34	1,069 11	Established Sept. 1, 1873.
1,679,938	36,580,857	272,991	107,342 34	2.9	801 06	111,475 69	
223,679	9,871,956	114,790	70,977 54	7.2	825 32	34,608 66	
216,766	7,939,585	233,517	33,149 82	4.2	974 99	10,236 65	
26,307	520,311	86,718	2,986 95	5.7	497 82	664 65	Established October 1, 1873.
8,029	552,099	92,016	3,262 11	5.9	543 68	959 29	Established Sept. 1, 1873.
25,647	815,005	101,875	5,116 96	6.3	639 62	2,225 39	Established July 1, 1873.
5,368,437	59,442,773	412,797	133,791 43	2.25	929 11	63,862 80	
257,715	11,137,509	210,142	52,932 46	4.75	998 72	28,992 99	
254,783	8,000,564	258,083	29,227 77	3.65	942 83	12,906 44	
42,711	1,670,177	167,018	6,560 82	3.9	656 08	2,212 35	Do.
8,819	441,921	110,480	2,688 90	6.1	672 22	484 86	Do.
11,694	606,254	86,608	4,419 10	7.3	631 30	1,172 34	Do.
333,364	2,930,399	244,200	9,323 34	3.2	775 95	2,210 24	
35,769	908,648	151,441	3,560 02	3.9	593 34	1,339 42	Do.
239,954	9,175,468	295,983	26,947 95	2.9	869 29	9,907 86	
45,020	850,259	170,052	2,852 24	3.3	570 45	662 98	Do.
27,026	684,683	114,114	2,639 91	3.8	439 98	617 15	Established Dec. 1, 1873.
11,429	861,021	143,503	4,132 37	4.8	688 73	1,347 90	Established July 1, 1873.
11,851	682,086	136,417	2,575 98	3.8	515 20	1,127 31	Established October 1, 1873.
13,504	1,356,408	193,772	6,056 89	4.2	865 27	1,925 14	
23,713	1,162,149	193,691	4,089 41	3.5	681 57	738 70	Established July 1, 1873.
17,713	748,237	93,530	4,662 73	6.2	582 84	1,374 70	Established August 1, 1873.
39,925	1,721,114	286,852	3,520 44	2.04	586 74	2,314 21	Do.
24,788	1,474,126	245,687	3,448 05	2.3	574 67	2,032 29	Established Sept. 1, 1873.
8,677	838,584	167,717	3,536 71	4.2	707 34	1,253 87	
37,179	2,272,976	206,634	8,537 66	3.3	776 15	6,167 87	
1,765	202,197	50,549	1,797 34	8.9	449 33	335 38	Established Nov. 1, 1873.
211,901	5,372,908	206,650	20,153 93	3.7	775 15	5,714 76	
74,789	1,707,097	121,935	9,444 20	5.5	674 58	4,225 88	
88,889	2,168,950	240,994	6,319 84	2.45	702 20	4,250 63	Established July 1, 1873.
12,408	538,699	134,675	1,945 34	3.6	486 33	600 97	Established Nov. 1, 1873.
19,938	832,903	138,817	5,029 50	6.03	838 25	751 03	
47,480	1,881,428	235,178	17,363 03	3.9	920 38	1,274 57	
14,350	520,202	104,050	2,408 83	4.6	481 77	872 33	Established October 1, 1873.
188,674	6,415,640	246,755	26,536 91	4.1	1,020 65	7,544 98	
48,085	1,770,715	221,339	5,809 62	3.3	726 20	1,686 60	
33,469	1,262,003	180,286	6,061 52	4.8	865 93	1,239 77	
64,822	1,309,693	187,103	6,100 00	4.6	871 43	899 08	
95,492	2,900,596	241,883	9,021 91	3.1	751 83	2,145 07	
201,160	5,530,606	230,442	21,907 30	3.9	912 80	9,857 03	
31,004	1,091,485	155,926	5,211 55	4.8	744 51	1,943 91	Established August 1, 1873.
64,950	698,767	99,827	4,846 55	6.9	692 37	1,632 14	Established July 1, 1873.
37,476	2,204,731	200,430	9,283 19	4.2	843 84	2,360 40	
63,391	4,409,760	209,988	21,065 87	4.8	1,003 13	9,834 68	
14,709	1,265,824	210,971	4,694 73	3.7	782 45	1,285 49	
43,532	1,829,925	166,357	9,957 50	5.4	905 23	4,723 66	
724,004	8,042,942	178,732	37,964 27	4.7	843 65	30,462 67	
3,633,885	120,816,101	318,776	353,502 79	2.9	930 09	837,640 20	
23,882	809,673	134,945	3,355 70	4.1	559 28	1,117 44	Established Sept. 1, 1873.
38,499	1,070,177	178,363	3,834 69	3.6	639 11	1,443 98	Established July 1, 1873.
13,922	649,126	108,188	3,175 79	4.9	529 30	401 78	Established October 1, 1873.
30,190	841,025	105,128	5,321 06	6.3	665 13	1,382 69	Established July 1, 1873.
58,795	1,161,428	145,178	5,549 55	4.8	693 69	1,044 20	Do.
5,032	271,991	54,398	1,964 83	7.2	392 96	316 57	Established Jan. 1, 1874.
3,266,355	58,439,542	282,316	213,887 16	3.7	1,033 27	200,915 67	
137,758	5,442,995	226,791	19,193 86	3.5	799 74	11,147 29	
66,638	2,002,288	200,228	8,767 24	4.3	876 72	2,831 20	
18,059	319,250	79,812	1,677 48	5.3	419 37	573 35	Established Dec. 1, 1873.
19,936	629,642	157,410	2,790 58	4.4	697 54	1,641 85	Established July 1, 1873.
14,028	2,220,397	148,026	12,755 31	5.7	850 35	10,059 22	
34,205	1,031,504	147,358	4,661 02	4.5	665 86	1,222 10	Do.
15,902	1,107,530	138,441	6,805 89	6.1	850 74	1,440 20	
79,298	2,639,181	164,949	12,128 32	4.6	758 02	2,679 29	
191,283	6,183,638	309,182	17,082 87	2.8	854 14	8,874 43	
42,756	714,747	119,124	3,147 10	4.4	524 52	982 17	Established October 1, 1873.
737,210	21,190,181	211,901	93,335 92	4.4	933 36	25,878 28	





system for the year ended June 30, 1873—Continued.

Newspapers.	Pieces handled.		Cost of service.			Amount of local postage.	Remarks.
	Aggregate	Per carrier.	Aggregate, including incidentals.	Per piece.	Per carrier.		
				<i>Mills.</i>			
99,370	1,567,393	195,924	\$5,060 68	3.3	632 58	2,179 30	Established August 1, 1873.
31,073	916,003	152,667	5,289 00	5.8	881 50	1,063 19	
321,771	6,669,483	185,263	34,998 06	5.2	972 11	16,645 59	
19,779	881,520	146,920	4,033 94	4.6	672 32	1,750 30	Established July 1, 1873.
23,190	533,429	133,357	2,250 10	4.2	562 52	719 85	Established Sept. 1, 1873.
33,676	1,249,994	156,249	4,636 43	3.7	579 55	2,880 85	Established August 1, 1873.
175,636	3,677,196	245,146	13,016 08	3.5	867 74	4,724 25	
163,292	3,308,221	254,478	10,810 19	3.3	831 53	2,850 32	
16,093	1,029,097	205,819	4,007 99	3.9	801 60	1,739 28	
201,121	4,168,120	277,874	12,528 59	3.00	835 24	4,987 53	
69,025	2,631,726	202,440	11,222 71	4.3	863 28	2,537 85	
24,208	6,001,821	171,480	34,033 78	5.7	972 39	14,149 29	
29,129	901,619	180,324	3,031 38	3.4	606 28	846 74	Do.
7,752	498,861	35,633	2,866 40	5.7	204 89	292 84	Discontinued Sept. 30, 1873.
22,539	1,445,860	131,442	9,018 49	6.2	819 86	2,564 72	
25,703	1,548,822	154,822	8,575 31	5.5	857 53	3,806 43	
21,562,436	503,386,397	.....	1,796,872 58	3.58	877 84	1,611,481 66	
.....	.....	.....	5,823 83				
.....	.....	.....	1,802,696 41				

**Statement of the operations of the free-delivery**

Name of post-office.	Number of carriers.	Delivered.					Collected.	
		Mail.		Local.		Newspapers.	Letters.	Postal cards.
		Letters.	Postal cards.	Letters.	Postal cards.			
Saint Paul, Minn ..	8	467, 732	31, 847	24, 444	14, 695	239, 577	600, 110	29, 67
Salem, Mass .....	6	323, 744	22, 104	36, 703	5, 849	222, 871	257, 232	16, 45
San Francisco, Cal.	36	1, 700, 623	86, 660	553, 965	164, 360	630, 182	2, 992, 130	219, 77
Savannah, Ga .....	6	349, 359	22, 504	33, 105	9, 168	85, 187	331, 319	31, 02
Springfield, Ill .....	4	205, 742	27, 819	10, 735	4, 298	155, 471	91, 020	15, 12
Springfield, Mass ..	8	535, 138	52, 221	70, 516	13, 047	183, 814	322, 734	26, 44
Syracuse, N. Y .....	15	1, 642, 028	70, 932	185, 544	52, 563	790, 195	649, 840	80, 67
Toledo, Ohio .....	13	1, 216, 124	91, 984	85, 317	53, 031	492, 681	1, 040, 402	165, 34
Trenton, N. J .....	5	418, 825	26, 253	26, 081	12, 096	213, 203	295, 922	20, 67
Troy, N. Y .....	15	1, 677, 673	134, 113	183, 790	52, 978	675, 220	1, 102, 599	140, 12
Utica, N. Y .....	13	1, 052, 333	83, 982	102, 110	19, 150	425, 293	798, 130	21, 64
Washington, D. C ..	35	2, 293, 795	91, 048	319, 297	72, 136	1, 098, 723	1, 729, 676	102, 53
Wheeling, W. Va ..	5	298, 654	30, 067	19, 512	5, 491	183, 004	300, 409	35, 37
Williamsburgh, NY	14	248, 699	23, 079	14, 642	4, 473	91, 373	101, 298	7, 54
Wilmington, Del ..	11	674, 707	33, 707	91, 153	24, 177	362, 601	311, 332	25, 64
Worcester, Mass ..	10	632, 395	62, 096	68, 210	32, 650	301, 989	383, 565	42, 12
Total .....	2, 049	166, 020, 370	11, 000, 809	45, 179, 295	8, 958, 106	56, 468, 582	177, 898, 474	16, 291, 25

Salary of special agents of Post-Office Department paid out of the appropriation for letter-carriers...

Total .....

system for the year ended June 30, 1873—Continued.

Newspapers.	Pieces handled.		Cost of service.			Amount of local postage.	Remarks.
	Aggregate	Per carrier.	Aggregate, including incidentals.	Per piece.	Per carrier.		
				Mills.			
99,370	1,567,393	195,924	\$5,060 68	3.3	632 58	2,179 30	Established August 1, 1873.
31,073	916,003	152,667	5,289 00	5.8	881 50	1,063 19	
321,771	6,669,483	185,263	34,998 06	5.2	972 11	16,645 59	
19,779	881,520	146,920	4,033 94	4.6	672 32	1,750 30	Established July 1, 1873.
23,190	533,429	133,357	2,250 10	4.2	562 52	719 85	Established Sept. 1, 1873.
33,676	1,249,994	156,249	4,636 43	3.7	579 55	2,880 85	Established August 1, 1873.
175,636	3,677,196	245,146	13,016 08	3.5	867 74	4,724 25	Do. Discontinued Sept. 30, 1873.
163,202	3,308,221	254,478	10,810 19	3.3	831 55	2,850 32	
16,093	1,029,097	205,819	4,007 99	3.9	801 60	1,739 28	
201,121	4,168,120	277,874	12,528 59	3.00	835 24	4,987 53	
69,025	2,631,726	202,440	11,222 71	4.3	863 28	2,537 85	
274,208	6,001,821	171,480	34,033 78	5.7	972 39	14,149 29	
29,129	901,619	180,324	3,031 38	3.4	606 28	846 74	
7,752	498,861	35,633	2,866 40	5.7	204 89	292 84	
22,539	1,445,860	131,442	9,018 49	6.2	819 86	2,564 72	
25,703	1,548,822	154,822	8,575 31	5.5	857 53	3,866 43	
21,562,436	503,386,397		1,796,872 58	3.58	877 84	1,611,481 66	
			5,823 83				
			1,802,696 41				

POST-OFFICE DEPARTMENT, MONEY-ORDER OFFICE,  
November 6, 1874.

SIR: By the act approved July 27, 1868, the fees to be charged for the issue of money-orders were fixed as follows: On all orders not exceeding \$20, 10 cents; on all orders over twenty and not exceeding thirty dollars, 15 cents; on all orders over thirty and not exceeding forty dollars, 20 cents; and on orders over forty and not exceeding fifty dollars, 25 cents. This schedule of fees was modified by the act approved June 8, 1872, which went into effect July 1, 1872, reducing the fee on all orders not exceeding \$10 to 5 cents. The loss to the Department, on account of this reduction, is estimated at \$60,668.99 during the year ended June 30, 1873, and \$75,970.54 during the year following. Within the last fiscal year 4,420,633 money-orders were issued, at an average cost, including their payment, of  $7\frac{84}{100}$  cents each, and the average amount received for the issue and payment of these orders was  $10\frac{44}{100}$  cents each, showing an average revenue of  $2\frac{60}{100}$  cents derived from each order issued. Of these orders, however, not less than 1,936,044 were issued and paid for a fee of 5 cents, or at a loss of  $2\frac{84}{100}$  cents each, and this loss was made up by the issue of orders upon which a fee of 10 cents or more was charged. At the present time the salaries of the Superintendent and employes of the Money-Order Office in Washington, the salaries of the employes of the Money-Order Division of the Office of the Auditor of the Treasury for the Post-Office Department, and the cost of books, blanks, stationery, and printing, are paid out of appropriations made by Congress, therefore no account of them is taken in the above calculation. It is estimated that 5,260,000 money-orders will be issued during the year to end June 30, 1875, being an increase of about 18 per cent., and that the expenses of the system will reach \$410,000, the addition to which of the cost of clerical labor, printing, blanks, &c., heretofore paid out of appropriations, and estimated at \$210,320, will increase the expenses of the system to \$620,320.

I consider the present practice of issuing money-orders at less than their cost unwise, and I would therefore urgently recommend the adoption of the following modified schedule of fees, viz: On orders not exceeding fifteen dollars, 10 cents; on orders over fifteen and not exceeding thirty dollars, 15 cents; on orders over thirty and not exceeding forty dollars, 20 cents; and on orders over forty and not exceeding fifty dollars, 25 cents. It is estimated that if the above rates had been established on the 1st of July last, the receipts in fees during the current fiscal year ending June 30, 1875, would reach \$691,712.65, from which, after the payment of all the expenses of the system, a net revenue of \$71,392.65 would accrue to the United States for the service of this Department. An estimate in detail of the receipts and expenditures for the fiscal year 1875, upon the above basis, is herewith submitted. With the adoption of this schedule I further recommend that the Postmaster-General be authorized to contract with the lowest bidder for the books, blanks, stationery, and printing for the transaction of the money-order business, unless the same, or a portion thereof, can be furnished at equally low rates by the Congressional Printer; and, also, to pay out of the proceeds of the money-order business the compensation of the Superintendent and other employes of the Money-Order Office in this Department, and that he be further authorized to place, from time to time, to the credit of the Treasurer of the United States, out of the proceeds of said business, such sums as may be necessary

to defray the cost of clerical labor in the Money-Order Division of the Auditor of the Treasury for the Post-Office Department.

I have the honor to be, sir, your obedient servant,  
C. F. MACDONALD,  
Superintendent.

Hon. MARSHALL JEWELL,  
Postmaster-General.

MONEY-ORDER OFFICE.

*Estimate of receipts and expenditures for year ending June 30, 1875, upon the basis of the following schedule of fees :*

	Cents.
For orders not exceeding \$15.....	10
For orders over \$15 and not exceeding \$30 .....	15
For orders over \$30 and not exceeding \$40 .....	20
For orders over \$40 and not exceeding \$50 .....	25
Total amount of fees .....	\$691,712 65
Allowances to postmasters for commissions, clerk-hire, lost remittances, &c .....	\$410,000
Salaries in Superintendent's Office.....	35,320
Salaries in Auditor's Office .....	90,000
Books, blanks, and printing.....	75,000
Stationery .....	10,000
	<u>620,320 00</u>
Balance, being revenue .....	71,392 65

*Items of expenditure during the fiscal year ended June 30, 1874, not charged to the money-order system but paid out of regular appropriations.*

Salaries in Superintendent's Office.....	\$31,600
Salaries in Auditor's Office .....	83,500
Books, blanks, and printing for Superintendent's Office.....	50,000
Books, blanks, and printing for Auditor's Office .....	10,000
Stationery .....	7,000
Total .....	<u>182,100</u>

# REPORT OF THE AUDITOR OF THE TREASURY FOR THE POST-OFFICE DEPARTMENT.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
October 10, 1874.

SIR: I have the honor to submit the following report of the receipts and expenditures of the Post-Office Department, together with the operations of this office in connection therewith, for the fiscal year ended June 30, 1874:

## COLLECTION OF POST-OFFICE REVENUES.

The number of post-offices in operation during the year was 35,450, which are thus classified under the regulations adopted for the government of the Department.

The following-named offices, seventy-one in number, are denominated depositories, and are required by the Postmaster-General to receive and retain, subject to the drafts of the Department, the funds of certain adjacent offices, as well as the revenues of their own:

### *List of offices designated as depositories, with names of postmasters.*

Albany, N. Y.....	J. F. Smyth.	Milwaukee, Wis....	S. C. West.
Atlanta, Ga.....	Saml. Bard.	Mobile, Ala.....	M. D. Wickersham.
Bangor, Me.....	A. B. Farnham.	Montpelier, Vt.....	J. W. Clark.
Batavia, N. Y.....	Wm. Tyrrell.	Nashville, Tenn....	H. W. Hasslock.
Binghamton, N. Y....	E. B. Stephens.	Newark, N. J.....	Wm. Ward.
Buffalo, N. Y.....	J. M. Schemerhorn.	New Haven, Conn..	N. D. Sperry.
Cleveland, Ohio.....	John W. Allen.	Ogdensburgh, N. Y..	R. G. Pettibone.
Columbus, Ohio.....	Jas. M. Comly.	Olean, N. Y.....	J. G. Johnson.
Concord, N. H.....	M. T. Willard.	Peoria, Ill.....	D. W. Magee.
Davenport, Iowa.....	Edward Russell.	Pittsburgh, Pa.....	E. C. Negley.
Des Moines, Iowa....	J. S. Clarkson.	Plattsburgh, N. Y..	H. S. Ransom.
Detroit, Mich.....	F. W. Swift.	Portland, Me.....	C. W. Goddard.
Dover, Del.....	F. A. Smith.	Portsmouth, Ohio..	L. Adair.
Dubuque, Iowa.....	G. L. Torbert.	Providence, R. I....	E. S. Jackson.
Easton, Pa.....	J. K. Dawes.	Quincy, Ill.....	M. Piggott.
Evansville, Ind.....	T. R. McFerson.	Raleigh, N. C.....	W. W. Holden.
Fort Wayne, Ind.....	J. J. Kamm.	Richmond, Va.....	E. L. Van Lew.
Geneva, N. Y.....	Chas. L. Hemiup.	Ripon, Wis.....	H. S. Town.
Grand Rapids, Mich..	A. B. Turner.	Rochester, N. Y....	E. M. Smith.
Harrisburgh, Pa.....	Geo. Bergner.	Rutland, Vt.....	A. H. Tuttle.
Hartford, Conn.....	John H. Burnham.	Sandusky, Ohio.....	A. C. Van Tine.
Huntsville, Ala.....	J. D. Sibley.	Scranton, Pa.....	J. A. Scranton.
Indianapolis, Ind....	W. R. Holloway.	Springfield, Ill.....	J. L. Crane.
Kalamazoo, Mich....	L. B. Kendall.	Springfield, Mass...	H. C. Lee.
Keene, N. H.....	H. C. Henderson.	Steubenville, Ohio..	J. M. Reede.
Knoxville, Tenn.....	William Rule.	Saint Paul, Minn....	J. A. Wheelock.
Lafayette, Ind.....	J. L. Miller.	Syracuse, N. Y.....	D. H. Bruce.
Lancaster, N. H.....	John W. Spalding.	Urbana, Ohio.....	D. C. Hilt.
Leavenworth, Kans..	D. R. Anthony.	Utica, N. Y.....	C. H. Hopkins.
Lexington, Ky.....	S. W. Price.	Vincennes, Ind.....	W. N. Denny.
Lima, Ohio.....	C. Parmenter.	Wheeling, W. Va....	C. J. Rawling.
Louisville, Ky.....	L. M. Porter.	Williamsport, Pa....	Robert Hawley.
Lowell, Mass.....	E. T. Rowell.	Wooster, Ohio.....	A. L. McClure.
Madison, Wis.....	E. W. Keyes.	Worcester, Mass....	Josiah Pickett.
Meadville, Pa.....	L. D. Williams.	Zanesville, Ohio....	J. J. Douglas.
Memphis, Tenn.....	J. Deloach.		

The following depositaries and assistant treasurers receive and retain, subject to the warrants of the Post-Office Department, the funds of such post-offices as are instructed to deposit in their hands :

Designated depositaries.

S. J. Holly .....	Buffalo, N. Y.	J. Cushman.....	Olympia, W. T.
E. W. Little.....	Santa Fé, N. M.	Thomas Steel.....	Pittsburgh, Pa.
J. P. Luce.....	Louisville, Ky.	C. H. Lorde.....	Tucson, Arizona.

Assistant treasurers.

Thomas Hillhouse...	New York, N. Y.	C. H. Baldwin.....	Charleston, S. C.
George Eyster.....	Philadelphia, Pa.	W. E. Davis.....	Cincinnati, Ohio.
Peter Negley.....	Baltimore, Md.	J. D. Webster.....	Chicago, Ill.
F. Haven, jr.....	Boston, Mass.	A. G. Edwards.....	Saint Louis, Mo.
B. F. Flanders.....	New Orleans, La.	William Sherman...	San Francisco, Cal.

One hundred and thirty post-offices are draft-offices, and during the year paid 17,909 drafts issued by the Postmaster-General, countersigned, entered and sent out by the Auditor, for sums in the aggregate of.....	\$2, 293, 723 27
Forty-five hundred and twenty-seven offices are deposit-offices, a portion of which during the year deposited with the Treasurer and assistant treasurers of the United States the sum of.....	5, 421, 112 43
The remaining deposit-offices deposited with the depositaries named above the sum of \$367,275.10, which is embraced in the \$2,293,723.27, paid on the drafts of the Department by said depositaries and draft-offices.	
Twenty-five thousand six hundred and ninety offices are collection-offices, and paid on collection-orders issued to mail-contractors the sum of.....	3, 640, 667 96
Five thousand and thirty-two offices are special and mail-messenger offices, and derive their mail-supplies by the payment of the revenue of their offices therefor, amounting to.....	630, 004 31
<hr/>	
The amount paid into the Treasury by postmasters for the use and purposes of the Post-Office Department during the fiscal year was.....	11, 985, 507 97

REVENUE ACCOUNT OF THE POST-OFFICE DEPARTMENT.

The receipts of the Department for the fiscal year ended June 30, 1874, were.....	\$26, 471, 071 82
The amount placed in the Treasury for the service of the Department for the fiscal year, being grants in aid of the revenues under the following acts of Congress, were:	
Under the second section of the act approved March 3, 1873, for mail-steamship service between San Francisco, Japan, and China.....	\$500, 000 00
Under the second section of the act approved March 3, 1873, for mail-steamship service between the United States and Brazil.....	150, 000 00
Under the second section of the act approved March 3, 1873, for mail-steamship service between San Francisco and the Sandwich Islands. (The sum of \$56,250 was drawn under this act, of which amount \$43,750 was subsequently deposited to the credit of the appropriation).....	12, 500 00
Under the second section of the act approved March 3, 1869, for supplying deficiency in the revenue of the Post-Office Department for the fiscal year ended June 30, 1870.....	3, 541 47
Under the first section of the act approved March 3, 1871, for supplying deficiency in the revenue of the Post-Office Department for the fiscal year ended June 30, 1871.....	1, 007, 444 83
Under the third section of the act approved March 3, 1871, for supplying deficiency in the revenue of the Post-Office Department for the fiscal year ended June 30, 1872	18, 397 66
Under the fourth section of the act approved June 1, 1872, for supplying deficiency in the revenue of the Post-Office Department for the fiscal year ended June 30, 1873	333, 947 56



Under the third section of the act approved March 3 1873,  
for supplying deficiency in the revenue of the Post-  
Office Department for the fiscal year ended June 30, 1874 \$3, 896, 602 00

	\$5, 922, 433 35
Aggregate of revenue and grants.....	32, 393, 505 37
The expenditures of the Department for the fiscal year ended June 30, 1874, were.....	32, 126, 414 37
Excess of receipts.....	267, 090 79

The net revenue of the Department from postages, being the aggregate of balances due the United States by postmasters on the adjustment of their quarterly accounts for the year, after deducting their compensation and the expenses of their offices, was:

For the quarter ended September 30, 1873.....	\$3, 674, 122 52
For the quarter ended December 31, 1873.....	3, 593, 883 34
For the quarter ended March 31, 1874.....	4, 016, 432 25
For the quarter ended June 30, 1874.....	3, 677, 687 61
Total.....	14, 962, 125 92

The amount of book, newspaper, and pamphlet postage paid in money was:

For the quarter ended September 30, 1873.....	\$342, 658 47
For the quarter ended December 31, 1873.....	349, 354 47
For the quarter ended March 31, 1874.....	353, 195 14
For the quarter ended June 30, 1874.....	341, 165 97
Total.....	1, 386, 374 05

The amount of letter-postage paid in money was:

For the quarter ended September 30, 1873.....	\$76, 157 47
For the quarter ended December 31, 1873.....	75, 288 96
For the quarter ended March 31, 1874.....	89, 260 77
For the quarter ended June 30, 1874.....	85, 557 93
Total.....	326, 295 13

The amount of stamps, stamped envelopes, postal cards, and newspaper-wrappers sold was:

For the quarter ended September 30, 1873.....	\$6, 355, 160 47
For the quarter ended December 31, 1873.....	5, 291, 396 02
For the quarter ended March 31, 1874.....	5, 752, 501 07
For the quarter ended June 30, 1874.....	5, 989, 664 65
Total.....	23, 388, 722 21

The amount of official stamps furnished the different Departments, and included in the above amount of stamps sold, was:

To the Executive Office.....	\$600 00
To the Department of State.....	23, 329 77
To the Navy Department.....	21, 179 00
To the War Department.....	74, 571 60
To the Agricultural Department.....	34, 680 00
To the Interior Department.....	129, 991 50
To the Department of Justice.....	5, 390 00
To the Treasury Department.....	499, 000 00
To the Post-Office Department.....	970, 000 00
Total.....	1, 759, 301 87

The number of quarterly returns of postmasters received and audited, on which the sum of \$14,962,125.92 was found due the United States, was:

For the quarter ended September 30, 1873.....	32, 215
For the quarter ended December 31, 1873.....	32, 957
For the quarter ended March 31, 1874.....	33, 172
For the quarter ended June 30, 1874.....	32, 981
Total.....	131, 325

## MAIL-TRANSPORTATION.

The amount charged to transportation accrued and placed to the credit of mail-contractors and others for mail-transportation during the year, was—

For the regular service of mail-routes .....	\$15,148,709 74
For the supply of special and mail-messenger offices .....	629,974 31
For the salaries of postal-railway clerks, route, and other agents .....	2,115,764 83
For the salaries and per diem of the assistant superintendents of the postal-railway service .....	56,098 04
	<hr/>
	17,950,546 92

*Foreign mail-transportation.*

San Francisco, Japan, and China .....	\$500,000 00
San Francisco and the Hawaiian Islands .....	12,500 00
United States and Brazil .....	150,000 00
San Francisco, Japan, and China, (extra service) .....	6,262 69
New York and Rio de Janeiro .....	67 62
New York, Great Britain, and Ireland .....	142,609 89
Boston and Great Britain .....	4,115 37
Portland, Detroit, Chicago, and Great Britain .....	6,731 32
Boston, Portland, and Nova Scotia .....	1,608 12
Boston and Prince Edward Island .....	106 07
New Orleans and Vera Cruz .....	56 77
New York and San Francisco via Panama .....	25,782 33
New York, West Indies, and Bermuda .....	10,873 83
Baltimore, Havana, and New Orleans .....	3,336 55
New York, Havana, and Vera Cruz, and Philadelphia and Havana .....	54,167 07
New Orleans, Havana, France, and Spain .....	107 85
New York, England, France, and Germany .....	71,218 18
New York, New Granada, Venezuela, and the United States of Colombia .....	998 62
New York, Baltimore, and Bremen .....	10,130 00
Philadelphia, England, and Belgium .....	465 32
Cleveland and Canada .....	45 40
New York, Belgium, and Norway .....	19 11
Expenses of Government mail-agent at Havana .....	800 00
Expenses of Government mail-agent at Panama .....	1,485 15
Expenses of Government mail-agent at Aspinwall .....	940 00
Expenses of Government mail-agent at Hioga, Japan .....	625 00
	<hr/>
	1,005,052 26
	<hr/>
	18,955,599 18

The amount credited to transportation accrued and charged to contractors was—

For fines imposed .....	\$1,710 60
For deductions .....	65,125 17
	<hr/>
	66,835 77

Net amount to the credit of mail-contractors and others .....

18,888,763 41

The amount actually paid during the year was .....

\$18,881,319 05

## STATEMENT OF COLLECTING DIVISION.

This division has had charge of 25,580 accounts of postmasters who became late during the period from July 1, 1871, to June 30, 1874.

Amounts collected from postmasters becoming late prior to July 1, 1873.

Collected by draft .....	\$236,256 00
Collected by suit .....	15,760 42
Credited on vouchers .....	55,774 90
Charged to suspense .....	145 91
Charged to bad debts .....	3,200 17
Charged to compromise debts .....	49,900 40

Total ..... 361,127 80

Amounts due postmasters becoming late prior to July 1, 1873 .....	\$72,579 41
Amount paid thereon .....	\$34,450 50
Amount remaining due .....	34,259 48
Amount closed by suspense .....	3,869 43
	72,579 41

Amount collected by draft from contractors ..... \$7,320 51

Number of changes of postmasters reported by appointment-office during the fiscal year was 9,137; and the balances due the United States upon the accounts of said late postmasters amount to .....	\$399,300 91
Of which there has been collected by draft .....	\$151,892 80
Charged to suspense .....	215 88
Charged to bad debts .....	20 06
	152,128 74

Total remaining due .....	247,231 50
Of which there is in suit .....	\$2,706 66
Of which there is not in suit .....	244,524 84
	247,231 50

Amount due postmasters late during the fiscal year .....	\$62,233 77
Amount paid thereon .....	31,466 60
Amounts due by late postmasters for which suits were instituted during the fiscal year .....	230,311 24
Amount collected by suit during fiscal year .....	43,369 76

The subjoined tables, numbered from 1 to 57, inclusive, exhibit in detail the transactions of the Department for the fiscal year.  
I have the honor to be, very respectfully,

J. J. MARTIN, Auditor.

Hon. MARSHALL JEWELL,  
Postmaster-General.

No. 1.—Statement exhibiting quarterly the receipts of the Post-Office Department under several heads during the fiscal year ended June 30, 1874.

Receipts	Quarter ended Septem-ber 30, 1873.	Quarter ended Decem-ber 31, 1873.	Quarter ended March 31, 1874.	Quarter ended June 30, 1874.	Aggregat
Letter-postage .....	\$76,187 48	\$75,288 96	\$89,260 88	\$85,557 93	\$326,295 25
Book, newspapers, and pamph-let postage .....	342,658 47	349,354 47	353,195 14	341,165 98	1,386,314 06
Box-rents and branch offices .....	316,702 03	308,497 40	302,422 40	299,304 02	1,226,926 85
Fines and penalties .....	2,363 10	1,793 15	4,169 41	2,385 46	10,711 12
Postage-stamps, stamped en-velopes, and postal cards .....	6,355,160 46	5,291,396 02	5,752,501 07	5,989,664 65	23,388,722 20
Dead-letters .....	1,951 00	2,800 00	2,070 00	1,900 00	8,721 00
Revenue from money-order business .....				105,198 12	105,198 12
Miscellaneous .....	6,019 61	3,371 58	3,742 25	4,990 78	18,124 22
Total .....	7,101,042 15	6,032,501 58	6,507,361 1	6,830,166 94	26,471,071 70

J. J. MARTIN

No. 2.—Statement exhibiting quarterly the expenditures of the Post-Office Department, under their several heads, for the fiscal year ended June 30, 1874.

Expenditures.	Quarter ended September 30, 1873.	Quarter ended December 31, 1873.	Quarter ended March 31, 1874.	Quarter ended June 30, 1874.	Aggregate.
Compensation to postmasters..	\$1, 456, 328 72	\$1, 454, 243 56	\$1, 449, 252 11	\$1, 458, 647 78	\$5, 818, 472 17
Ship, steamboat, and way letters	1, 280 79	1, 143 49	701 01	1, 063 13	4, 188 42
Transportation of the mails....	4, 495, 978 77	4, 812, 615 42	4, 717, 122 48	4, 865, 602 38	18, 881, 319 05
Wrapping-paper.....	6, 450 00	6, 450 00	1, 825 00	5, 475 00	20, 200 00
Office-furniture.....	6, 774 41	15, 819 14	4, 690 78	5, 427 57	32, 711 90
Advertising.....	57, 418 49	12, 837 22	9, 613 81	29, 851 16	109, 740 68
Mail bags and catchers.....	63, 269 80	49, 871 91	49, 503 51	50, 069 54	212, 714 76
Mail locks and keys.....	11, 642 55	19, 425 12	6, 731 38	2, 344 66	40, 143 71
Mail depredations and special agents.....	40, 407 49	38, 290 21	53, 278 11	33, 502 82	165, 478 63
Compensation of clerks for offices.....	795, 909 12	818, 535 80	824, 197 83	859, 319 02	3, 297, 961 77
Postage-stamps, stamped envelopes, and postal cards....	260, 075 59	141, 568 36	200, 112 03	243, 440 10	845, 196 08
Compensation of letter-carriers.	436, 746 40	455, 915 51	455, 693 35	454, 063 42	1, 802, 418 68
Dead letters.....	550 88	.....	2, 995 17	2, 437 84	5, 983 89
Postmarking and canceling stamps.....	1, 919 18	2, 165 82	1, 994 69	1, 873 85	7, 953 54
Twine.....	13, 728 00	10, 547 50	6, 006 50	19, 292 50	49, 574 50
Letter-balances.....	663 00	.....	2, 336 90	1, 750 00	4, 749 90
Rent, light, and fuel.....	82, 603 88	92, 900 40	96, 138 03	105, 056 14	376, 698 45
Balances due foreign countries.	43, 653 71	46, 240 22	80, 885 09	34, 105 93	204, 884 95
Miscellaneous.....	41, 559 75	57, 416 69	49, 483 04	61, 095 05	209, 554 53
Miscellaneous, Stationery.....	9, 581 10	9, 799 45	8, 961 76	8, 126 66	36, 468 97
Total.....	7, 816, 541 63	8, 045, 805 82	8, 021, 522 58	8, 242, 544 55	32, 126, 414 58

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.  
19 P M G

## No. 3.—Statement of the postal receipts and expenditure of

States and Territories.	Letter-postage.	Book, newspaper, and pamphlet postage.		Box-roads and branch offices.	Postage-stamp postage, stamped envelopes, and postal cards.	Total receipts.
Maine .....	\$3,919 21	\$30,464 12	\$92 96	\$23,900 53	\$352 344 89	\$49,717 61
New Hampshire .....	1,445 75	21,208 53	134 78	11,426 50	222,509 59	235,214 55
Vermont .....	1,244 69	20,546 12	58 44	8,843 90	909,870 87	940,472 93
Massachusetts .....	18,917 24	71,494 06	445 73	97,293 85	1,668,977 37	1,767,727 75
Rhode Island .....	2,069 87	8,109 47	79 48	18,721 32	183,170 33	212,130 40
Connecticut .....	3,865 18	30,829 89	155 47	35,398 70	497,559 71	567,843 95
New York .....	122,333 96	202,159 19	1,480 35	180,668 29	4,561,917 49	5,067,668 28
New Jersey .....	6,293 54	29,076 15	156 76	24,427 13	468,429 82	528,386 39
Pennsylvania .....	24,125 83	131,031 65	813 03	83,177 54	2,210,129 03	2,451,377 08
Delaware .....	417 60	3,638 03	61 78	954 76	62,413 41	67,443 57
Maryland .....	8,129 87	20,693 76	61 05	9,346 27	430,170 09	468,401 05
Virginia .....	1,897 81	24,512 06	52 55	11,913 20	338,133 74	376,515 36
West Virginia .....	669 23	10,348 41	12 90	3,731 54	116,194 91	120,949 59
North Carolina .....	847 56	14,196 91	12 65	8,483 61	156,675 02	176,167 75
South Carolina .....	1,039 39	10,659 13	15 11	7,242 39	134,427 25	153,373 07
Georgia .....	2,068 02	19,330 02	81 32	20,619 49	273,116 98	315,113 83
Florida .....	1,515 42	2,795 05	3 45	4,396 45	53,140 29	61,849 61
Ohio .....	9,817 96	108,667 90	914 79	73,106 94	1,468,251 97	1,650,544 66
Michigan .....	25,279 66	61,021 82	300 77	56,911 80	708,226 53	851,439 58
Indiana .....	2,916 33	52,363 67	229 25	41,659 24	609,515 17	714,564 66
Illinois .....	19,554 69	106,521 12	2,413 67	93,699 96	1,750,130 35	1,972,329 79
Wisconsin .....	6,878 32	47,796 61	196 35	38,438 94	514,159 46	607,671 68
Iowa .....	4,873 42	58,610 14	194 12	49,246 82	590,495 78	703,486 27
Missouri .....	5,872 75	50,945 13	289 17	32,497 02	726,995 15	816,590 12
Kentucky .....	2,067 13	24,048 87	150 97	14,881 16	252,217 23	303,314 39
Tennessee .....	1,550 76	19,647 94	150 89	10,822 11	271,243 02	303,044 72
Alabama .....	1,637 06	12,143 29	22 43	14,089 84	155,312 21	183,172 83
Mississippi .....	732 71	12,466 55	19 80	13,567 99	139,714 92	166,487 27
Arkansas .....	504 67	62,092 42	40 65	7,545 97	86,970 90	107,054 54
Louisiana .....	9,206 84	12,057 58	29 62	25,405 60	230,795 52	277,565 56
Texas .....	3,469 59	24,005 64	35 51	32,143 22	226,556 24	317,210 20
California .....	12,464 84	34,493 82	143 25	48,882 67	578,028 94	673,019 52
Oregon .....	171 40	6,170 00	6 49	7,797 49	55,783 36	64,848 25
Minnesota .....	6,347 75	25,454 61	132 60	20,940 40	261,393 17	314,926 53
Kansas .....	1,360 81	21,638 55	32 25	26,196 42	265,104 70	314,229 73
Nebraska .....	1,005 31	10,473 93	37 39	9,687 49	129,842 09	151,036 12
Nevada .....	420 46	5,229 60	7 00	11,683 75	49,491 62	61,404 83
Colorado .....	559 21	5,409 13	52 10	18,223 83	80,250 32	104,404 26
Utah .....	455 12	4,340 97	21 50	5,887 25	46,974 99	53,728 76
New Mexico .....	35 13	722 13	9 30	1,463 20	12,479 90	14,700 36
Washington .....	110 22	2,275 63	1 25	2,000 95	16,665 16	21,052 19
Dakota .....	968 22	1,390 82	.....	1,909 25	18,247 34	21,555 43
Arizona .....	37 39	499 24	.....	614 50	7,400 80	8,512 93
Idaho .....	84 73	1,158 63	1 00	1,933 00	9,230 47	12,406 80
Wyoming .....	103 29	1,170 98	60	2,145 70	19,516 31	22,846 28
Montana .....	120 90	1,941 90	25	5,033 00	18,976 65	25,171 55
Alaska .....	3 92	9 90	.....	.....	125 93	139 75
District of Columbia .....	4,621 29	5,777 02	4 83	6,519 48	167,032 99	183,337 61
<b>Total</b> .....	<b>323,420 62</b>	<b>1,346,166 25</b>	<b>9,223 11</b>	<b>1,225,832 51</b>	<b>21,645,328 72</b>	<b>24,544,750 21</b>
Deduct miscellaneous items .....	2,874 63	187 81	.....	993 34	1,743,393 42	1,747,469 20
<b>Total</b> .....	<b>320,545 99</b>	<b>1,345,978 44</b>	<b>9,223 11</b>	<b>1,224,839 17</b>	<b>19,901,935 30</b>	<b>22,797,280 01</b>

NOTE.—The following items of expenditure and revenue, being of a general nature, are not embraced in the foregoing statement.

Amount paid for foreign mails and expenses of Government agents .....	\$1,005,852 3
Balance due foreign countries .....	294 45
Ship, steamer, and way letters .....	4 14 8
Wrapping-paper .....	20 90 8
Twine .....	43 54 3
Office-furniture .....	2 10 2
Advertising .....	94 21 4
Mail bags and catchers .....	100 12 5
Salaries and per diem of assistant superintendents of postal railway-service .....	56 09 9
Mail locks and keys .....	68 10 7
Postmarking and canceling stamps .....	2 53 34
Mail-depredations and special-agents .....	163 67 6
Letter-balances .....	4 10 8
Expenses of postage-stamps, stamped envelopes, and postal cards .....	243 15 4
Dead letters .....	3 97 4
Miscellaneous payments .....	107 67 6
Excess of expenditures brought down .....	3,041 83 11

**\$3,786,237 7**

the United States for the fiscal year ended June 30, 1874.

Compensation of postmasters.	Clerks for offices, rent, light, and fuel, and inci- dental expenses of post-offices.	Compensation of letter-carriers.	Compensation of route-agents, postal-railway clerks, mail- messengers, and supply of special offices.	Transportation by States.	Total expenses.	Excess of expen- ditures over re- ceipts.	Excess of receipts over expendi- tures.
\$148,286 87	\$46,988 99	\$10,160 49	\$39,954 81	\$169,662 54	\$415,053 70	\$5,342 01	.....
102,155 68	16,783 11	6,100 00	19,595 23	70,711 64	215,345 66	.....	\$41,439 49
106,022 05	14,472 64	.....	17,981 94	113,257 44	251,734 07	11,130 05	.....
319,445 99	323,046 64	154,434 71	155,753 26	307,668 91	1,260,349 51	.....	616,778 74
36,876 75	21,657 30	12,755 31	7,357 15	23,638 27	102,284 78	.....	111,865 79
156,811 65	64,953 11	18,495 16	41,789 58	96,008 22	378,057 72	.....	189,811 23
663,491 09	1,092,511 31	545,098 73	380,349 45	1,265,643 72	3,947,094 30	.....	1,121,468 98
157,120 32	41,445 07	49,030 94	26,610 89	207,203 19	481,410 41	.....	47,573 05
501,087 51	331,914 96	266,328 33	177,535 48	742,790 18	2,019,716 46	.....	431,620 62
19,906 38	8,325 94	9,018 49	7,882 93	22,912 82	68,046 56	560 29	.....
70,668 07	24,535 35	59,906 10	41,020 58	312,157 72	562,287 82	99,826 68	.....
120,503 03	49,792 62	17,448 85	41,014 87	394,355 34	623,114 71	246,599 26	.....
51,418 69	17,396 15	3,031 38	15,778 53	104,254 42	191,879 17	60,992 88	.....
70,199 36	15,651 23	.....	36,925 31	173,973 88	296,649 78	118,229 03	.....
45,628 58	12,947 88	5,116 96	16,640 82	149,996 31	230,390 55	77,007 28	.....
91,150 58	47,559 47	7,450 86	50,531 25	238,606 80	435,298 93	120,085 14	.....
23,709 30	5,587 53	.....	8,855 19	251,202 43	289,354 45	227,503 79	.....
400,397 48	198,870 96	108,854 58	193,072 49	1,066,728 49	1,967,924 00	307,164 44	.....
258,302 77	97,833 83	30,396 00	65,922 76	492,727 78	945,183 14	92,442 50	.....
235,499 90	103,623 69	29,709 12	94,967 63	398,128 54	861,928 88	148,985 22	.....
451,926 82	413,838 55	149,058 78	355,126 59	904,082 43	2,274,093 17	301,713 38	.....
196,168 08	55,757 87	21,907 30	70,000 85	354,088 53	697,922 63	90,450 95	.....
259,679 00	59,865 76	13,818 31	128,220 54	438,758 24	900,341 85	196,921 57	.....
197,644 61	142,727 43	102,802 86	134,757 41	705,878 54	1,289,810 85	413,211 63	.....
111,540 29	50,422 62	29,225 81	47,767 78	278,890 76	517,753 26	124,378 90	.....
82,013 33	51,094 54	18,305 10	71,413 08	229,055 93	457,821 98	153,867 26	.....
64,268 44	26,716 91	4,846 55	35,052 14	307,317 04	438,201 08	254,386 66	.....
76,744 57	13,118 98	.....	27,934 42	220,682 44	338,480 41	171,958 44	.....
44,639 05	12,485 69	.....	12,064 31	328,093 36	397,282 41	295,328 30	.....
37,600 44	63,347 51	37,964 27	18,989 21	281,682 84	439,584 27	161,999 05	.....
114,858 43	47,842 26	.....	31,185 81	678,177 76	872,064 20	524,854 01	.....
113,389 72	100,673 37	34,998 06	59,893 85	867,237 28	1,176,192 28	504,178 76	.....
26,200 27	10,090 44	.....	2,861 18	101,319 25	140,471 14	70,532 40	.....
102,929 14	34,990 52	10,272 23	54,397 89	295,121 33	497,711 11	183,418 58	.....
134,428 27	31,583 20	2,408 82	69,398 03	420,558 19	658,376 52	344,025 79	.....
47,695 54	12,516 12	3,834 69	72,700 49	415,351 64	558,098 48	406,842 27	.....
24,240 62	11,698 24	.....	1,946 95	193,564 77	231,450 58	164,618 15	.....
30,442 34	19,828 28	.....	8,694 73	196,801 54	255,784 89	151,170 30	.....
18,428 79	9,356 10	.....	1,436 58	374,034 10	403,255 57	345,576 44	.....
11,112 42	953 17	.....	1 36	325,817 48	337,884 49	323,148 83	.....
10,415 80	956 19	.....	605 50	182,147 47	194,124 96	173,051 75	.....
7,947 20	1,197 25	.....	428 57	38,756 11	48,339 13	26,623 44	.....
5,111 50	200 00	.....	6 00	95,885 03	101,202 53	92,250 60	.....
6,950 76	1,139 25	.....	77 00	122,089 00	130,256 01	117,848 14	.....
11,074 98	3,114 19	.....	109 70	12,424 09	26,722 96	3,826 08	.....
14,321 61	5,573 25	.....	100 00	123,771 82	143,766 68	118,593 78	.....
241 75	.....	.....	.....	.....	241 75	101 94	.....
6,961 00	117,842 25	34,073 78	101,159 02	.....	259,996 05	76,039 62	.....
793,716 88	3,906,831 69	1,796,872 58	2,745,739 14	15,093,215 61	29,336,375 90	7,306,845 59	2,560,557 90
24,755 29	23,235 96	5,546 10	.....	11,341 64	42,195 71	42,195 71	1,747,449 26
218,472 17	3,930,067 65	1,802,418 68	2,745,739 14	15,081,873 97	29,378,571 61	7,349,041 30	4,308,007 16

the above statement, viz:

Receipts on account of dead-letters.....	\$8,721 00
Receipts on account of fines and penalties.....	10,711 12
Receipts on account of miscellaneous.....	8,904 11
Receipts on account of money-order business.....	105,198 12
Excess of transportation accrued.....	7,444 36
Total excess of expenditures over receipts.....	5,655,342 76

5,796,321 47

J. J. MARTIN, Auditor.

No. 4.—Table exhibiting the receipts and expenditures of the Post-Office Department from July 1, 1836, to June 30, 1874.

Year.	Receipts.			Expenditures.
	Revenue.	Treasury grants.	Total.	
1837.....	\$4, 945, 668 21	.....	\$4, 945, 668 21	\$3, 288, 319 11
1838.....	4, 238, 733 46	.....	4, 238, 733 46	4, 430, 622 21
1839.....	4, 484, 656 70	.....	4, 484, 656 70	4, 636, 538 31
1840.....	4, 543, 521 92	.....	4, 543, 521 92	4, 718, 256 64
1841.....	4, 407, 726 27	\$482, 657 00	4, 890, 383 27	4, 499, 527 61
1842.....	4, 546, 849 65	.....	4, 546, 849 65	5, 674, 151 11
1843.....	4, 296, 225 43	.....	4, 296, 225 43	4, 374, 753 71
1844.....	4, 237, 287 83	.....	4, 237, 287 83	4, 296, 517 11
1845.....	4, 289, 841 80	.....	4, 289, 841 80	4, 530, 731 11
1846.....	3, 487, 199 35	750, 000 00	4, 237, 199 35	4, 076, 038 11
1847.....	3, 880, 309 23	12, 500 00	3, 892, 809 23	3, 979, 542 11
1848.....	4, 555, 211 10	125, 000 00	4, 680, 211 10	4, 326, 456 27
1849.....	4, 705, 176 28	.....	4, 705, 176 28	4, 479, 049 11
1850.....	5, 499, 984 86	.....	5, 499, 984 86	5, 212, 953 41
1851.....	6, 410, 604 33	.....	6, 410, 604 33	6, 275, 411 11
1852.....	5, 184, 526 84	1, 741, 444 44	6, 925, 971 28	7, 106, 479 11
1853.....	5, 240, 724 70	2, 255, 000 00	7, 495, 724 70	7, 982, 756 11
1854.....	6, 255, 586 22	2, 736, 748 96	8, 992, 335 18	8, 577, 424 11
1855.....	6, 642, 136 13	3, 114, 542 26	9, 756, 678 39	9, 961, 342 11
1856.....	6, 920, 821 66	3, 748, 881 56	10, 669, 703 22	10, 405, 247 11
1857.....	7, 353, 951 76	4, 528, 004 67	11, 881, 956 43	11, 506, 057 11
1858.....	7, 486, 792 86	4, 679, 270 71	12, 166, 063 57	12, 782, 479 11
1859.....	7, 968, 424 07	3, 915, 946 49	11, 884, 430 56	11, 431, 023 11
1860.....	8, 518, 067 40	11, 154, 167 54	19, 672, 234 94	19, 170, 609 11
1861.....	8, 349, 296 40	4, 639, 806 53	12, 989, 102 93	13, 006, 721 11
1862.....	8, 299, 820 90	2, 598, 953 71	10, 898, 774 61	11, 125, 341 11
1863.....	11, 163, 789 59	1, 007, 848 72	12, 171, 638 31	11, 314, 264 11
1864.....	12, 438, 253 78	749, 980 00	13, 188, 233 78	12, 644, 754 11
1865.....	14, 556, 158 70	3, 968 46	14, 560, 127 16	13, 694, 721 11
1866.....	14, 386, 986 21	.....	14, 386, 986 21	15, 352, 073 11
1867.....	15, 237, 026 87	3, 991, 666 67	19, 228, 693 54	19, 245, 463 11
1868.....	16, 292, 600 80	5, 696, 525 00	21, 989, 125 80	22, 730, 586 11
1869.....	18, 344, 510 72	5, 707, 115 30	24, 051, 626 02	23, 681, 131 11
1870.....	19, 772, 220 65	4, 022, 140 85	23, 794, 361 50	23, 991, 837 11
1871.....	20, 037, 045 42	4, 126, 200 00	24, 163, 245 42	24, 390, 164 11
1872.....	21, 915, 426 37	4, 993, 750 00	26, 909, 176 37	26, 658, 121 11
1873.....	22, 996, 741 57	5, 990, 475 00	28, 987, 216 57	29, 084, 965 11
1874.....	26, 471, 071 82	5, 922, 433 55	32, 393, 505 37	32, 126, 414 11
Total.....	360, 361, 037 86	88, 695, 027 42	449, 056, 065 28	447, 154, 981 11

OFFICE OF THE AUDITOR OF THE TREASURY,  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

J. J. MARTIN,  
Auditor

No. 5.—Statement in detail of miscellaneous payments made by the Post-Office Department during the fiscal year ended June 30, 1874, exhibiting the sums placed to the credit of postmasters and others, and charged to miscellaneous account.

Date.	To whom allowed.	For what object.	Amount.
1873.			
Oct. 4	J. S. Harris .....	Late postmaster, Kansas City, Mo., for miscellaneous items in the 2d quarter, 1873.	\$11 11
14	J. E. Larkin.....	Late postmaster, Concord, N. H., for miscellaneous items in the 1st quarter, 1873.	1 11
22	T. C. Phillips .....	Postmaster, Bay City, Mich., for advertising arrival and departure of mails during the 2d quarter, 1873.	5 11
Nov. 22	Sayles J. Bowen .....	Late postmaster, Washington, D. C., for repairs, plumbing, and miscellaneous items in the 2d quarter, 1865.	5 11
Dec. 5	W. P. Mangum.....	United States consul and postal agent, Nagasaki, Japan, for printing and mail-tags in the 4th quarter, 1872.	28 11
1874.			
Jan. 9	George H. Hawes .....	Postmaster, Sissiton agency, Dakota, for stage fare to Fort Wadsworth and return while taking charge of post-office property at that place during the 3d quarter, 1873.	5 11



## No. 5.—Statement of miscellaneous payments made by the Department, &amp;c.—Continued.

Date.	To whom allowed.	For what object.	Amount.
1874.			
Jan. 28	David Brown .....	Postmaster, Nebraska City, Nebr., for miscellaneous items in the 3d quarter, 1873.	\$5 00
29	H. N. Parker .....	Postmaster, Whitehall, N. Y., for miscellaneous items in the 4th quarter, 1873.	1 00
Feb. 6	W. C. E. Thomas .....	Postmaster, Green Bay, Wis., for miscellaneous items in the 3d quarter, 1873.	15 00
10	N. P. Trist .....	Postmaster, Alexandria, Va., for a marble basin in the 4th quarter, 1873.	5 00
17	C. O. Shepard .....	United States consul and postal agent, Kanagawa, Japan, for miscellaneous items in the 3d quarter, 1873.	123 22
20	G. H. Keith .....	Postmaster, Minneapolis, Minn., for repairs in the 4th quarter, 1873.	299 81
Mar. 4	S. G. Trott .....	Late postmaster, Charleston, S. C., for expenses in fitting up the post-office at Charleston during 1866.	1,430 05
4	Henry Russell .....	Postmaster, Morristown, N. Y., for miscellaneous items in the 4th quarter, 1873.	1 20
4	George F. Seward .....	United States consul-general and postal agent, Shanghai, China, for miscellaneous items from July 1 to December 31, 1872, and from July 1 to December 31, 1873.	143 50
7	C. D. Hyler .....	Late postmaster, Fredericktown, Ohio, for hire of horse and carriage to take charge of and discontinue the post-office at, Lucerne, Ohio, February 25, 1873.	2 00
11	A. D. Downs .....	Late postmaster, Wyandotte, Kans., for expenses incurred in opening and transporting safe in the 4th quarter, 1872.	27 50
Apr. 4	S. P. Gambia .....	Postmaster, San Antonio, Tex., for miscellaneous items in the 1st, 2d, 3d, and 4th quarters, 1873.	180 92
June 1	John B. Campbell .....	Postmaster, Fort Scott, Kans., for miscellaneous items in the first quarter, 1874.	67 85
July 15	Louisa P. Molloy .....	Postmaster, Potosi, Mo., for money stolen from a registered letter on the night of December 16, 1872, the amount being returned to the owner by postmaster on order of a special agent of the Post-Office Department.	125 00
15	W. T. Clark .....	Late postmaster, Galveston, Tex., for miscellaneous items in the 2d quarter, 1874.	54 07
23	J. L. Dunning .....	Late postmaster, Atlanta, Ga., for miscellaneous items in the 3d quarter, 1873.	6 25
Aug. 3	Oliver Wood .....	Late postmaster, Portsmouth, Ohio, for miscellaneous items in the 3d quarter, 1873.	9 50
25	C. H. Hopkins .....	Postmaster, Utica, N. Y., for directories in the 2d quarter, 1874.	16 00
Sept. 8	L. Colt .....	Postmaster, Suspension Bridge, N. Y., for miscellaneous items in the 4th quarter, 1873.	11 02
16	Seth Williams .....	Postmaster, Buckhannon, W. Va., for hire of a horse and buggy while taking charge of the post-office at Peck's Run.	3 50
26	C. O. Shepard .....	United States consul and postal agent, Kanagawa, Japan, for miscellaneous items in the 4th quarter, 1873, and 1st and 2d quarters, 1874.	579 47

## No. 5.—Amounts paid by the Department on warrants, and charged to miscellaneous account.

Date.	To whom allowed.	For what object.	Amount.
1873.			
Oct. 2	George H. Reay .....	New York, N. Y., for official stamped envelopes furnished the Department during the quarter ended September 30, 1873.	\$1,860 13
10	G. D. Chenoweth .....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistant draughtsmen to the topographer, for the half month ended October 15, 1873.	857 08
22	Jos. H. Blackfan .....	Washington, D. C., for services in connection with the proposed postal convention between the United States and France during the years 1872 and 1873.	300 00
28	J. S. Botsford .....	United States district attorney, Jefferson City, Mo., for fees in sundry post-office cases.	50 00
29	G. D. Chenoweth .....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistant draughtsmen to the topographer, for the month ended October 31, 1873.	827 90

## No. 5.—Amounts paid by the Department on warrants, &amp;c.—Continued.

Date.	To whom allowed.	For what object.	Amount.
1873.			
Nov. 7	David McClelland.....	Washington, D. C., for engraving copper plates, and printing from copper sheets of post-route maps.	\$1,311 62
13	G. D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistants to the topographer, for the half month ended November 15, 1873.	99 50
24	G. D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistant draughtsmen to the topographer, for the month ended November 30, 1873.	72 72
Dec. 2	A. P. Eastlake .....	Washington, D. C., for expenses incurred in visiting post-offices on business relating to the registered-letter system	131 2
	George H. Reay.....	New York, N. Y., for official-stamped envelopes delivered to postmasters during October and November, 1873.	2 29 50
6	C. F. Baldwin .....	Washington, D. C., for moiety of fine imposed by district court of Northern Ohio upon E. H. Gilbert for embezzling money-order funds.	27 12
9	A. Comstock .....	Brooklyn, N. Y., for moiety of a fine imposed by the district court (United States) of Northern New York, upon E. J. Reynolds, convicted of mailing obscene matter.	65 00
18	G. D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistants to the topographer, for the month of December, 1873.	1,561 50
27	The National Bank - Note Company.	New York, N. Y., for printing and numbering drafts and warrants.	42 50
1874.			
Jan. 2	George H. Reay.....	New York, N. Y., for official-stamped envelopes delivered to the Department during the month of December, 1873.	1,724 13
9	George F. Nesbitt.....	New York, N. Y., for post-office and registered-package envelopes furnished in the 4th quarter, 1873.	9,173 50
10	Kearney & Cunningham....	Attorneys, Natchitoches, La., for fee in one post-office case.	10 00
10	James McPherson .....	Clerk United States court, Savannah, Ga., for fees in sundry post-office cases.	2 50
10	E. P. Johnson .....	United States attorney, Cheyenne, Wyo., for fee in case of United States <i>vs.</i> John O'Leary, late postmaster, Piedmont, Wyo.	16 00
10	H. Slack .....	United States marshal, Charleston, W. Va., for fees in two post-office cases.	45 00
15	G. D. Chenoweth.....	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended January 15, 1874.	66 00
24	The National Bank - Note Company.	New York, N. Y., for one million registered-package seals, furnished January 20, 1874.	1,500 00
26	William H. Smythe.....	United States marshal, Atlanta, Ga., for fees in sundry post-office cases.	15 00
28	Felix Brannigan.....	United States attorney, Jackson, Miss., for fees in three post-office cases.	35 00
29	G. D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including the salaries of the assistant draughtsmen to the topographer, for the month of January, 1874.	1,547 00
Feb. 2	Isaac C. Mills. ....	United States marshal, Little Rock, Ark., for fee in one post-office case.	2 50
2	J. H. Pierce.....	United States marshal, Oxford, Miss., for fees in three post-office cases.	40 00
2	G. R. Hill .....	Clerk United States district court, Oxford, Miss., for fees in eight post-office cases.	30 00
3	George H. Reay .....	New York, N. Y., for official-stamped envelopes furnished postmasters during the month of January, 1874.	1,386 00
11	G. D. Chenoweth.....	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended February 15, 1874.	67 00
18	Rufus I. Palen .....	Clerk United States court, Santa Fé, N. Mex., for fee in one post-office case.	1 00
20	The National Bank - Note Company.	New York, N. Y., for printing, numbering, paper, and binding impressions of drafts in ten books.	20 00
20	J. H. Bradley .....	Attorney at law, Boston, Mass., for fee in one case.	100 00
21	A. S. Gray .....	United States marshal, Harrisonburgh, Va., for fee in one post-office case.	2 50

## No. 5.—Amounts paid by the Department on warrants, &amp;c.—Continued.

Date.	To whom allowed.	For what obj-ct.	Amount.
1874. Feb. 25	G. D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including the salaries of the assistants to the topographer, for the half month ended February 28, 1874.	\$894 88
28	Ralph Wilcox.....	Clerk United States court, Portland, Oreg., for fees in one post-office case.	14 60
Mar. 4	C. I. Schofield .....	United States attorney, Kansas, for fees in seven cases against late postmasters.	65 00
4	George H. Reay.....	New York, N. Y., for official stamped envelopes delivered during the month of February, 1874.	1,320 59
11	G. D. Chenoweth .....	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended March 15, 1874.	670 00
23	J. R. Beckwith .....	United States attorney, New Orleans, La., for fee in one post-office case.	20 00
27	G. D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including the salaries of the assistants to the topographer, for the month ended March 31, 1874.	921 01
28	J. E. Townsend .....	Clerk United States court, Jacksonville, Fla., for fees in two post-office cases.	20 55
28	James B. C. Drew .....	United States district attorney, Jacksonville, Fla., for fees in six post-office cases.	135 00
Apr. 2	George H. Reay.....	New York, N. Y., for official-stamped envelopes delivered during the month of March, 1874.	1,862 04
7	George F. Nesbitt & Co. ....	New York, N. Y., for post-office envelopes furnished the Department during the first quarter, 1874.	12,571 66
13	G. D. Chenoweth .....	Washington, D. C., for salaries of assistants to the topographer, for the half month ended April 15, 1874.	670 00
18	The National Bank-Note Company.	New York, N. Y., for printing, numbering, paper, and binding impressions of drafts in five books.	144 38
24	D. McClelland .....	Washington, D. C., for engraving copper plates, and printing from copper, sheets of post-route maps.	2,044 60
25	G. D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistants to the topographer, for the month ended April 30, 1874.	1,098 77
May 4	George H. Reay.....	New York, N. Y., for official-stamped envelopes delivered during the month of April, 1874.	4,250 35
5	Rufus J. Palen.....	Santa Fé, N. Mex., for fees as clerk United States district court in two post-office cases.	13 20
7	The National Bank-Note Company.	New York, N. Y., for one million registered-package seals furnished during the month of April, 1874.	1,500 00
13	G. D. Chenoweth.....	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended May 15, 1874, and for incidental expenses incurred in the preparation and publication of post-route maps.	742 50
19	William G. Morris .....	Late United States marshal for California, for fees in seven post-office cases.	192 69
19	The National Bank-Note Company.	New York, N. Y., for printing, numbering, paper, and binding impressions of warrants in two books.	59 00
26	G. D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including the salaries of assistants to the topographer, for the half month ended May 31, 1874.	759 18
June 3	George H. Reay.....	New York, N. Y., for official-stamped envelopes delivered during the month ended May 31, 1874.	2,049 64
12	George B. McCartee .....	Washington, D. C., for 500, 2, sub-drafts furnished the Department, February 11, 1874.	10 62
13	J. H. Pierce.....	United States marshal, Oxford, Miss., for fees in four post-office cases.	67 70
13	G. D. Chenoweth.....	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended June 15, 1874.	670 00
27	G. D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the preparation and publication of post-route maps, including salaries of assistants to the topographer, for the half month ended June 30, 1874.	698 16
29	D. McClelland .....	Washington, D. C., for engraving copper plates, and printing from copper, sheets of post-route maps.	336 50

No. 5.—*Amounts paid by the Department on warrants, &c.*—Continued.

Date.	To whom allowed.	For what object.	Amount.
1874.			
June 30	R. G. Usher .....	United States marshal, Boston, Mass., for fee in one post-office case.	\$6 00
30	G. D. Chenoweth .....	Washington, D. C., for expenses incurred in the preparation and publication of post-route maps.	549 57
July 3	George H. Reay .....	New York, N. Y., for official stamped envelopes delivered to postmasters during the month of June, 1874.	2,065 47
7	B. H. Bristow .....	Secretary of the Treasury, Washington, D. C., for labor and material supplied by the photographer of the Treasury Department in photographing postal maps, &c.	222 00
10	J. O. Glover .....	United States attorney, Chicago, Ill., in case of Edward Quinlan vs. F. A. Eastman, late postmaster, Chicago, Ill., and George W. Wood, late special agent Post-Office Department.	250 00
10	The National Bank-Note Company.	New York, N. Y., for one million registered-package seals furnished July 6, 1874.	1,500 00
10	George F. Nesbitt & Co. ....	New York, N. Y., for registered-package envelopes furnished in June, 1874, as samples.	20 25
14	J. R. Beckwith .....	United States attorney, New Orleans, La., for fee in sundry post-office cases.	40 00
14	J. N. Kerns .....	United States marshal, Philadelphia, Pa., for fees in two cases against late postmasters.	30 35
14	George D. Chenoweth .....	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended July 15, 1874.	628 30
15	George F. Nesbitt & Co. ....	New York, N. Y., for post-office, and registered-package envelopes furnished postmasters and the Department during the 2d quarter, 1874.	16,192 14
17	Felix Brannigan .....	United States attorney, Jackson, Miss., for fees in two post-office cases.	20 00
18	J. P. C. Emmons .....	Attorney at law, Jacksonville, Fla., for legal services in case of the United States vs. M. H. Alberger, arrested on the charge of robbing the post-office at Jacksonville, Fla.	100 00
22	George F. Nesbitt & Co. ....	New York, N. Y., for post-office envelopes furnished postmasters and the Department June 30, 1874.	122 50
25	George Smith .....	United States marshal, Jefferson City, Mo., for fee in one post-office case.	13 50
25	William S. Tough .....	United States marshal, Leavenworth, Kans., for fees in eleven post-office cases.	122 10
28	George D. Chenoweth .....	Washington, D. C., for expenses incurred in the preparation and publication of post-route maps, including the salaries of assistants to the topographer, for the month ended June 30, 1874.	1,177 45
Aug. 3	George H. Reay .....	New York, N. Y., for official stamped envelopes delivered during the month ended July 31, 1874.	3,975 45
8	L. L. Lewis .....	United States attorney, Culpeper, Va., for fee in one post-office case.	25 00
8	D. T. Corbin .....	United States attorney, Charleston, S. C., for fee in one postal case.	10 00
8	G. R. Hill .....	Clerk United States court, Oxford, Miss., for fees in five post-office cases.	24 75
8	Isaac C. Mills .....	United States marshal, Little Rock, Ark., for fee in one post-office case.	13 50
12	A. C. Gibbs .....	Late United States attorney, Portland, Oreg., for fees in two post-office cases.	40 00
13	S. C. Parrish .....	Washington, D. C., for law-books for the use of the Post-Office Department.	225 50
14	G. D. Chenoweth .....	Washington, D. C., for salaries of assistants to the topographer, for the half month ended August 15, 1874.	730 45
19	Charles W. Preddy .....	Attorney at law, Little Rock, Ark., for legal services in sundry post-office cases.	250 00
19	Thomas G. Young .....	Late United States marshal for Oregon, for fees in two post-office cases.	57 00
19	R. J. Palen .....	Clerk United States court, Santa Fé, N. Mex., for fees in three post-office cases.	14 00
19	Ralph Wilcox .....	Clerk United States court, Portland, Oreg., for fee in one post-office case.	2 50
27	George D. Chenoweth .....	Washington, D. C., for expenses incurred in the preparation and publication of post-route maps, including the salaries of assistant draughtsmen to the topographer, for the half month ended August 31, 1874.	91 75
28	George H. Reay .....	New York, N. Y., for samples of registered-package envelopes furnished the Department.	24 50
Sept. 5	George H. Reay .....	New York, N. Y., for official stamped envelopes delivered during the month of August, 1874.	1,523 45

## REPORT OF THE POSTMASTER-GENERAL.

285

No. 5.—*Amounts paid by the Department on warrants, &c.*—Continued.

Date.	To whom allowed.	For what object.	Amount.
1874. Sept. 5	George B. McCartee.....	Washington, D. C., for engraving, printing, numbering, and binding post-office drafts and warrants.	214 62
10	J. W. Wells.....	United States attorney, Holly Springs, Miss., for fees in three post-office cases.	25 00
9	V. S. Lusk .....	United States attorney, North Carolina, for fees in three post-office cases.	60 00
15	G. D. Chenoweth.....	Washington, D. C., for salaries of assistant draughtsmen to the topographer, for the half month ended September 15, 1874.	740 00
16	H. W. Foote .....	Attorney at law, Macon, Miss., for legal services rendered in the cases of the United States <i>vs.</i> William McMorris and Richard Gray.	100 00
16	S. C. Parrish .....	Washington, D. C., for law-books furnished the Post-Office Department.	399 00
23	Fred. Beall .....	Attorney at law, Okolona, Miss., for services in the case of the United States <i>vs.</i> Wm. R. Rose, charged with taking letters from the West Point, Miss., post-office.	75 00
23	H. Slack .....	United States marshal, Charlestown, W. Va., for fee in one post-office case.	22 00
30	George D. Chenoweth.....	Washington, D. C., for incidental expenses incurred in the publication and preparation of post-route maps, including the salaries of assistant draughtsmen to the topographer, for the month of September, 1874.	1,775 52

No. 5.—*Amounts paid by the Department on drafts and charged to miscellaneous account.*

1873. Oct. 8	S. S. Marble.....	United States marshal, Portland, Me., for fee in one post-office case.	\$14 11
Nov. 13	G. W. Wells .....	United States attorney, Holly Springs, Miss., for fees in two post-office cases.	40 00
13	A. Armstrong.....	Late United States marshal, Saint Paul, Minn., for fees in two post-office cases.	34 50
13	A. P. Eastlake .....	Washington, D. C., for amount advanced to pay expenses in examining the registered-letter operations of various offices.	75 00
17	Charles S. Hamilton .....	United States marshal, Milwaukee, Wis., for fees in sundry post-office cases.	16 20
Dec. 19	A. E. Buck.....	Clerk United States circuit court, Atlanta, Ga., for fees in sundry post-office cases.	57 25
1874. Jan. 7	H. P. Farrow.....	United States attorney, Georgia, for fees in two post-office cases.	40 00
10	John B. Furay.....	Omaha, Nebr., for fee advanced by him to pay Pendleton and Baily, attorneys, in case of United States <i>vs.</i> D. W. Allison, charged with robbing United States mail.	20 00
10	William Pound .....	United States attorney, Dakota, for fee in one post-office case.	10 00
Feb. 2	H. H. Wells, jr.....	United States attorney, Richmond, Va., for fee in one case.	5 00
18	L. H. Miller.....	Baltimore, Md., for safe for dead-letter office, delivered February 16, 1874.	337 50
21	A. S. Thomas .....	Clerk United States court, Topeka, Kans., for fees in twenty-one post-office cases.	224 80
Mar. 7	Sherman Conant.....	United States marshal, Jacksonville, Fla., for fees in four post-office cases.	32 02
11	A. P. Eastlake .....	Washington, D. C., for amount advanced to pay expenses incurred in attending to registered-letter business.	50 00
21	G. W. Wood .....	Quincy, Ill., for services and expenses in case of Baum <i>vs.</i> Eastman, postmaster, and Wood, special agent, growing out of occupation of Burlington Hall for a post-office.	100 00
21	G. W. Wood .....	Quincy, Ill., for services and expenses in case of Quinlan <i>vs.</i> Eastman, postmaster, and Wood, special agent, growing out of occupation of store-room under Burlington Hall for a post-office.	100 00
28	N. J. Riddick .....	Clerk United States circuit court, Raleigh, N. C., for fees in five post-office cases.	58 50
Apr. 4	H. S. Burnell.....	Attorney at law, Little Rock, Ark., for services rendered in examination of witnesses in case of United States <i>vs.</i> James Morgan and John Miller, charged with robbing United States mail.	50 00
4	R. C. Badger .....	United States attorney, Raleigh, N. C., for fees in four post-office cases.	80 00
11	William Dally.....	United States marshal, Omaha, Nebraska, for fee in one post-office case.	18 56
25	J. M. Tomeny.....	Late United States marshal, Memphis, Tenn., for fees in sundry post-office cases.	88 74

Amounts paid by the Department on drafts, &c.—Continued.

Date.	To whom allowed.	For what object.	Amount.
1874.			
May 28	A. P. Eastlake.....	Washington, D. C., for expenses incurred in visiting New York City on business connected with the issue of registered-package envelopes.	\$50 00
June 3	A. P. Eastlake .....	Washington, D. C., for expenses incurred in visiting various offices to examine into the registered-letter system.	56 54
5	Wheeler & Marshall .....	Attorneys, Chattanooga, Tenn., for services in one post-office case.	25 00
5	Peter Melendy.....	United States marshal, Cedar Falls, Iowa, for fees in two post-office cases.	20 20
9	A. E. Buck .....	Clerk United States court, Atlanta, Ga., for fees in four post-office cases	60 54
9	E. R. Campbell.....	Clerk United States court, Nashville, Tenn., for fee in one post-office case.	11 54
9	N. W. Trimble.....	Clerk United States court, Mobile, Ala., for fees in two post-office cases.	34 55
10	M. Hopkins .....	Clerk United States court, Austin, Tex., for fees in sundry post-office cases.	116 98
10	A. M. Hughes.....	United States district attorney, Nashville, Tenn., for fee in one post-office case.	20 11
July 9	Sherman Conant .....	United States marshal, Jacksonville, Fla., for fee in one post-office case.	15 54
15	Church Howe.....	Late United States marshal, Wyoming Territory, for fee in one post-office case.	26 66
18	Nathan Truuler.....	United States attorney, Indianapolis, Ind., for fee in one post-office case.	10 00
18	C. B. Gould .....	Special agent, Post-Office Department, Emporium, Pa., for amount paid by him to an attorney, for fee in one post-office case.	10 54
18	E. W. Early.....	Clerk United States circuit court, Lynchburgh, Va., for fees in three post-office cases.	13 54
31	Israel McDanolds.....	Special agent, Post-Office Department, Elmira, N. Y., for moiety of fine in the case of the United States vs. John S. Pardee.	512 54
Aug. 4	A. P. Eastlake.....	Washington, D. C., for amount advanced to pay expenses in attending to business connected with the manufacture of registered-package envelopes.	75 00
5	George R. Peck .....	United States attorney, Topeka, Kans., for fees in seven post-office cases.	14 00
7	W. W. Murray.....	United States attorney, Memphis, Tenn., for fees two post-office cases.	4 00
7	E. R. Hampton.....	Clerk United States court, Asheville, N. C., for fees in six post-office cases.	53 54
25	W. H. Smythe.....	United States marshal, Atlanta, Ga., for fees in three post-office cases.	131 94
27	H. C. Alleman.....	United States attorney, Denver, Col., for commissions and expenses incurred in the collection of \$1,188.52 from L. C. Rockwell, late United States attorney, being money received by said Rockwell in case of United States vs. A. Sagendorf, late postmaster, Denver, Col.	202 54
28	A. P. Eastlake.....	Washington, D. C., for amount advanced to pay expenses while on business connected with the manufacture of registered-package envelopes.	50 54

Amounts allowed to the postmasters at the principal offices of the United States for incidental expenses of such offices actually and necessarily incurred, such as office-repairs, gas-furnace, telegraphing, and other miscellaneous expenses.

Third quarter, 1873 .....	\$36 00
Fourth quarter, 1873 .....	32 25 11
First quarter, 1874 .....	17 55 11
Second quarter, 1874.....	25 60 11
Total.....	102 161 22
Amount paid to postmasters and others.....	2 54 11
Amount paid by warrants.....	101 161 22
Amount paid by drafts.....	1 161 00
Total.....	205 54 33
Amount allowed for stationery.....	26 00 00
Total.....	231 54 33
Deduct amounts charged to postmasters for over-credits .....	1 12
Amount actually paid and charged to miscellaneous account....	230 42 21

J. J. MARTIN, Auditor.



States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue.		Drafts and deposits received.	Balance due postmasters.	Transferred from—			
				Total fees received.	Premiums.			Postage fund.	Swiss fund.	British fund.	German fund.
Alabama.....	57, 179	\$17, 584 48	\$1, 183, 384 83	\$6, 997 25	\$335 05	\$556, 348 03	.....	\$2, 191 33	\$72 00	\$1, 683 00	\$5, 242 00
Arizona Territory.....	3, 762	13, 185 43	139, 606 95	728 40	.....	.....	.....	274 00	.....	1, 094 50	1, 303 00
Arkansas.....	48, 200	27, 394 83	1, 999, 948 03	7, 203 10	.....	563, 061 00	.....	765 00	.....	3, 212 53	2, 108 23
California.....	62, 397	14, 570 28	1, 527, 666 50	8, 645 60	.....	1, 212, 421 00	\$278 56	9, 395 39	1, 624 61	36, 304 55	38, 295 25
Colorado Territory.....	28, 152	21, 248 36	612, 712 76	3, 530 95	.....	383, 194 00	.....	6, 572 00	164 00	31, 981 42	1, 421 00
Connecticut.....	73, 994	8, 983 95	1, 111, 562 22	7, 067 85	.....	468, 239 00	47 62	20, 991 29	520 00	41, 739 05	7, 285 00
Dakota Territory.....	6, 021	823 16	110, 132 82	668 75	.....	1, 950 00	.....	338 00	.....	182 00	258 00
Delaware.....	11, 690	2, 598 62	175, 391 05	1, 117 95	.....	7, 510 00	35 06	4, 110 00	35 00	3, 189 29	540 00
District of Columbia.....	31, 957	12, 035 98	633, 603 61	3, 648 80	.....	1, 406, 782 87	.....	.....	698 00	11, 256 00	6, 930 00
Florida.....	32, 247	28, 264 78	888, 277 90	4, 888 80	.....	172, 614 00	.....	.....	5 00	5, 794 50	1, 814 75
Georgia.....	65, 334	51, 399 71	1, 141, 924 90	7, 025 40	3 50	977, 979 75	63 26	6, 327 14	37	6, 962 80	5, 878 41
Idaho Territory.....	5, 194	6, 989 41	180, 132 87	959 10	.....	1, 004 00	37 54	.....	.....	8, 904 00	466 93
Illinois.....	485, 305	81, 112 67	6, 987, 120 24	45, 428 80	.....	6, 935, 382 00	294 22	44, 752 61	5, 254 72	75, 107 77	32, 027 89
Indiana.....	235, 880	45, 029 67	3, 374, 422 76	21, 970 75	.....	1, 142, 770 10	145 09	17, 385 09	829 44	26, 538 62	11, 449 58
Indian Territory.....	742	.....	17, 509 75	99 35	.....	.....	.....	.....	.....	.....	.....
Iowa.....	289, 735	46, 057 75	4, 282, 577 10	27, 909 45	.....	1, 491, 192 00	218 74	18, 499 12	1, 353 00	10, 316 57	10, 327 92
Kansas.....	117, 109	25, 662 79	2, 075, 558 58	12, 845 70	.....	647, 071 78	69 59	6, 382 22	175 00	3, 307 93	1, 832 40
Kentucky.....	79, 635	12, 011 03	1, 251, 716 98	7, 956 60	.....	1, 013, 679 00	36 09	6, 516 00	889 00	5, 882 97	5, 012 68
Louisiana.....	41, 211	29, 956 96	1, 082, 480 06	5, 987 50	.....	1, 443, 146 44	18 69	3, 945 00	518 00	6, 662 00	1, 650 25
Maine.....	69, 831	22, 858 92	1, 301, 348 39	7, 827 70	.....	591, 518 00	44 16	8, 153 58	152 00	109, 172 45	3, 814 75
Maryland.....	55, 187	10, 358 01	952, 497 19	5, 844 65	.....	1, 214, 113 00	.....	4, 600 44	947 00	9, 998 45	92, 247 42
Massachusetts.....	158, 213	37, 913 24	2, 762, 027 83	16, 849 55	15 82	1, 888, 994 88	25 22	36, 774 60	1, 530 00	177, 244 57	21, 321 00
Michigan.....	233, 703	53, 774 75	3, 663, 392 93	23, 047 00	.....	1, 780, 877 27	139 47	26, 393 97	852 25	52, 961 80	14, 963 37
Minnesota.....	107, 849	23, 696 29	1, 749, 725 31	10, 996 55	.....	669, 199 12	69 48	3, 698 93	354 00	5, 939 61	5, 640 58
Mississippi.....	77, 634	15, 198 34	1, 696, 898 15	9, 918 85	.....	4, 200 00	109 74	1, 381 27	8 21	2, 055 44	829 01
Missouri.....	187, 700	34, 776 86	3, 118, 142 04	19, 426 40	.....	3, 661, 217 13	555 46	14, 704 37	1, 847 00	30, 843 15	6, 022 04
Montana Territory.....	6, 941	4, 245 74	153, 855 00	889 95	.....	.....	.....	691 59	.....	1, 531 00	2, 184 78
Nebraska.....	53, 732	16, 303 87	954, 610 47	5, 849 10	.....	1, 092, 816 00	137 37	11, 918 39	.....	3, 269 27	2, 235 76
Nevada.....	9, 130	3, 090 56	266, 712 72	1, 450 15	.....	140 00	.....	234 00	337 00	7, 855 48	4, 523 00
New Hampshire.....	48, 823	6, 013 07	751, 253 03	4, 794 75	.....	85, 775 00	168 12	5, 884 41	102 00	22, 978 04	1, 635 32
New Jersey.....	57, 559	8, 005 34	956, 062 71	5, 898 55	.....	152, 725 00	111 77	28, 925 84	2, 097 00	52, 790 06	12, 392 40
New Mexico Territory.....	4, 430	1, 496 26	128, 996 44	704 25	.....	225 00	.....	274 00	.....	390 00	390 00
New York.....	350, 417	236, 063 48	5, 467, 595 36	34, 384 25	.....	16, 631, 278 84	269 81	134, 332 40	36, 474 46	257, 195 25	148, 824 70
North Carolina.....	62, 827	13, 541 15	1, 304, 703 66	7, 704 30	36 00	173, 190 00	12 36	1, 533 93	10 00	1, 620 00	7, 086 00
Ohio.....	354, 886	54, 264 13	5, 042, 410 67	32, 889 00	.....	3, 343, 372 12	590 61	54, 104 71	3, 341 00	89, 843 02	39, 631 68
Oregon.....	17, 665	9, 723 47	395, 005 84	2, 300 25	.....	280, 400 00	8 49	2, 349 64	498 00	5, 179 70	4, 464 50
Pennsylvania.....	257, 320	44, 339 13	3, 942, 527 00	25, 001 30	.....	2, 913, 930 12	542 89	50, 570 06	3, 395 00	121, 409 36	22, 784 00
Rhode Island.....	22, 952	2, 919 20	387, 235 56	2, 376 80	.....	121, 098 00	.....	2, 009 00	65 00	35, 651 73	3, 126 00



No. 6.—Statement showing the transactions of the Money-Order Office of the United States, &amp;c.—Continued.

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue.		Drafts and deposits received.	Balance due postmasters.	Transferred from—			
				Total fees received.	Premiums.			Postage fund.	Swiss fund.	British fund.	German fund.
South Carolina.....	43,843	\$9,507 20	\$854,754 18	\$5,147 90	.....	\$506,820 00	.....	\$1,280 93	.....	\$7,637 00	\$681 00
Tennessee.....	96,154	36,269 36	1,961,273 99	11,574 10	.....	2,104,826 50	\$63 15	15,865 94	\$2,064 69	7,373 00	2,380 00
Texas.....	67,354	43,179 66	1,578,106 03	9,001 25	\$112 80	789,403 02	344 72	17,644 92	246 00	7,520 88	9,779 61
Utah Territory.....	10,496	3,288 81	299,859 13	1,633 60	.....	750 00	.....	1,954 00	1,521 00	10,010 14	1,296 75
Vermont.....	51,133	7,777 65	762,650 62	4,925 40	.....	102,550 00	90 15	7,993 16	.....	7,542 18	14 00
Virginia.....	71,739	20,928 25	1,299,991 85	7,900 30	353 07	1,314,194 04	47 64	8,307 61	554 00	14,315 85	6,847 43
Washington Territory.....	6,715	1,772 09	187,229 40	1,030 00	.....	8,368 00	.....	716 00	.....	1,638 00	717 00
West Virginia.....	31,777	6,090 88	507,199 15	3,150 80	.....	56,865 00	20 35	5,238 00	129 00	3,290 67	2,444 00
Wisconsin.....	221,959	56,522 68	3,753,953 25	23,302 95	.....	2,374,591 43	217 03	14,918 98	1,953 82	22,094 19	18,465 50
Wyoming Territory.....	6,601	2,719 08	152,066 30	862 55	.....	.....	.....	.....	.....	904 00	308 00
Total.....	4,420,033	1,231,887 33	74,424,854 71	461,362 30	856 24	60,287,722 44	4,812 45	610,868 76	70,616 57	1,350,373 83	505,953 29

States and Territories.	Number of orders paid.	Amount of orders paid.	Amount of orders repaid.	Transferred to—				Deposits.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
				Postage fund.	Swiss fund.	British fund.	German fund.					
Alabama.....	24, 299	\$522, 867 10	\$5, 458 27	\$2, 010 17	.....	\$492 45	\$450 05	\$1, 220, 303 90	\$918 63	\$4, 018 13	\$17, 309 27	.....
Arizona Territory.....	18, 587	22, 760 08	8, 665 00	.....	.....	82 69	111 00	120, 178 08	5 00	299 67	11, 080 76	.....
Arkansas.....	35, 469	585, 806 11	8, 050 15	.....	.....	121 00	137 29	1, 240, 440 70	1, 456 89	3, 353 44	17, 411 70	\$31 04
California.....	16, 590	1, 173, 053 98	11, 297 52	.....	.....	2, 361 14	2, 912 30	1, 629, 600 00	94 90	8, 501 22	20, 753 12	48 34
Colorado Territory.....	66, 123	457, 315 77	5, 649 32	.....	.....	176 00	876 00	579, 805 00	252 48	2, 263 26	14, 426 07	32 59
Connecticut.....	1, 817	1, 104, 195 30	6, 850 34	.....	.....	1, 794 04	4, 216 38	533, 878 31	33 31	4, 643 14	10, 139 17	.....
Dakota Territory.....	7, 792	43, 793 64	1, 076 11	.....	.....	153 00	1, 354 00	66, 122 00	2 10	332 30	1, 519 58	.....
Delaware.....	40, 822	132, 107 06	1, 020 85	.....	.....	143 19	1, 109 52	58, 705 88	1 50	702 74	1, 733 36	2 27
District of Columbia.....	10, 071	737, 519 87	4, 678 19	.....	.....	121 00	475 00	1, 314, 577 79	4, 519 05	4, 520 32	8, 484 04	.....
Florida.....	42, 519	272, 708 48	4, 072 32	.....	.....	297 89	150 50	793, 530 96	212 97	2, 311 18	28, 488 03	.....
Georgia.....	645, 937	935, 888 04	7, 517 55	.....	.....	674 60	387 67	1, 190, 904 30	5 62	4, 305 99	55, 085 76	94 28
Idaho Territory.....	127, 060	25, 782 69	356 45	.....	.....	.....	379 11	76, 618 00	4, 09 84	384 10	7, 320 88	.....
Illinois.....	175, 624	8, 545, 906 52	45, 468 77	.....	.....	7, 786 89	38, 114 26	5, 439, 823 23	4, 591 77	98, 743 63	90, 635 36	156 01
Indiana.....	77	2, 145, 661 57	21, 441 04	.....	.....	2, 292 77	10, 620 50	2, 401, 293 55	.....	11, 648 79	44, 627 91	68 48
Indian Territory.....	.....	1, 759 18	13 50	.....	.....	.....	.....	15, 729 45	.....	37 52	69 45	.....
Iowa.....	82, 541	3, 042, 752 23	25, 400 39	.....	.....	4, 149 73	21, 557 81	2, 717, 773 00	74 70	15, 436 85	57, 074 59	71 35
Kansas.....	81, 336	1, 809, 139 76	12, 542 49	.....	.....	6, 093 17	6, 138 33	900, 265 54	83 75	8, 526 56	29, 203 01	144 19
Kentucky.....	45, 340	1, 605, 514 16	8, 396 77	.....	.....	1, 227 98	2, 976 73	684, 614 00	158 10	5, 037 36	15, 514 21	67 04
Louisiana.....	53, 311	1, 270, 323 00	5, 366 70	.....	.....	2, 294 00	4, 833 00	1, 226, 185 45	11, 402 62	4, 100 33	45, 689 17	18 63
Maine.....	85, 778	1, 073, 502 92	5, 646 10	.....	.....	1, 592 08	187 28	938, 608 00	87 18	5, 020 73	20, 144 72	75 88
Maryland.....	267, 810	1, 864, 438 53	6, 096 96	.....	.....	385 56	778 47	330, 558 00	226 79	6, 892 04	11, 098 70	46 13
Massachusetts.....	159, 239	3, 786, 107 59	16, 519 99	.....	.....	4, 828 01	1, 409 52	1, 076, 277 75	256 36	17, 137 08	38, 850 54	225 26
Michigan.....	57, 689	2, 823, 774 83	24, 029 34	.....	.....	5, 750 58	14, 105 61	2, 678, 076 30	30 15	13, 617 11	55, 384 99	118 81
Minnesota.....	18, 984	1, 145, 410 79	11, 383 81	.....	.....	3, 063 90	24, 725 16	1, 250, 189 00	10 12	5, 990 79	27, 735 11	2 99
Mississippi.....	249, 010	381, 854 40	9, 958 17	.....	.....	359 93	521 56	1, 299, 219 53	857 55	3, 942 18	33, 539 04	.....
Missouri.....	2, 055	5, 010, 271 55	23, 985 55	.....	.....	2, 190 72	14, 353 96	1, 760, 636 85	391 35	17, 493 17	55, 543 55	70 75
Montana Territory.....	31, 743	63, 640 62	796 95	.....	.....	32 96	209 12	93, 299 00	27 42	487 02	4, 904 97	.....
Nebraska.....	1, 380	711, 816 86	6, 788 47	.....	.....	1, 658 51	10, 197 56	1, 324, 273 00	21 62	4, 139 60	22, 674 73	28 88
Nevada.....	34, 327	46, 458 32	2, 295 18	.....	.....	45 08	429 52	229, 465 00	5 00	368 81	5, 276 00	.....
New Hampshire.....	52, 454	591, 832 54	3, 704 70	.....	.....	888 40	44 00	271, 001 10	51 28	3, 077 58	7, 870 80	27 38
New Jersey.....	730	910, 724 92	6, 993 87	.....	.....	3, 083 36	13, 848 77	267, 534 00	436 20	3, 868 91	9, 273 19	468 85
New Mexico Territory.....	838, 021	23, 805 70	154 00	.....	.....	52 00	223 00	105, 467 00	1 00	294 21	2, 879 04	.....
New York.....	25, 965	11, 276, 861 12	44, 946 10	.....	.....	1, 451, 374 79	203, 601 39	9, 344, 027 50	2, 251 76	45, 723 43	183, 998 63	425 00
North Carolina.....	377, 955	526, 558 17	6, 174 45	.....	.....	1, 185 00	286 00	943, 126 83	13 00	3, 883 73	18, 510 23	11 99
Ohio.....	6, 483	5, 886, 556 58	31, 991 81	.....	.....	7, 034 58	13, 056 67	2, 627, 012 62	1, 885 34	19, 990 92	48, 211 09	688 32
Oregon.....	316, 345	214, 582 08	2, 529 06	.....	.....	65 03	373 10	464, 591 00	28 12	1, 483 32	16, 212 81	5 37
Pennsylvania.....	15, 526	4, 662, 913 35	26, 274 33	.....	.....	11, 714 33	19, 525 22	2, 331, 335 24	3, 019 68	19, 568 14	51, 144 84	280 74
Rhode Island.....	.....	305, 430 99	2, 252 73	.....	.....	678 00	179 00	241, 601 00	.....	1, 425 27	2, 870 30	.....

No. 6.—Statement showing the transactions of the Money-Order Office of the United States, &amp;c.—Continued.

States and Territories.	Number of orders paid.	Amount of orders paid.	Amount of orders repaid.	Transferred to—				Deposits.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
				Postage fund.	Swiss fund.	British fund.	German fund.					
South Carolina.....	24,466	\$479,230 76	\$3,981 55	.....	\$43 49	\$212 00	\$575 09	\$281,546 19	\$9 70	\$2,543 98	\$17,674 56	\$10 98
Tennessee.....	74,262	1,567,911 16	10,955 80	\$15,065 00	336 60	1,007 00	2,222 00	2,489,738 18	945 35	7,136 92	46,355 19	17 53
Texas.....	28,695	758,537 32	10,835 07	1,714 56	1,011 51	2,122 59	5,954 48	1,606,839 14	106 24	4,813 96	63,404 02	.....
Utah Territory.....	5,025	135,550 10	937 35	.....	.....	643 27	791 09	177,044 00	101 70	724 27	4,499 55	22 10
Vermont.....	32,515	570,252 24	3,074 40	106 00	.....	377 92	121 13	306,355 18	13 00	3,067 03	10,125 60	50 66
Virginia.....	60,969	1,190,106 73	7,202 45	105 70	38 00	1,549 01	1,731 88	1,448,200 43	239 75	5,015 05	19,251 04	.....
Washington Territory.....	2,605	95,460 23	1,132 38	.....	.....	47 63	640 84	100,639 00	5 00	581 98	2,909 10	4 33
West Virginia.....	14,765	278,382 60	2,416 03	.....	164 00	176 60	866 08	295,287 00	32 55	1,429 70	5,673 29	.....
Wisconsin.....	147,310	2,909,440 57	23,840 00	1,261 15	2,737 41	5,385 75	38,504 92	3,209,368 43	123 61	14,482 67	60,654 17	221 15
Wyoming Territory.....	1,223	30,166 90	842 85	.....	.....	73 85	366 00	122,365 00	.....	362 89	2,682 44	.....
Total.....	4,416,114	73,736,435 01	473,721 24	531,240 00	108,652 48	1,537,839 98	465,687 78	60,408,730 41	35,251 36	321,789 06	1,326,532 68	3,467 92

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

No. 7.—Statement of the receipts and disbursements of the Money-Order Office for the fiscal year ended June 30, 1874.

RECEIPTS.

Balance in hands of postmasters June 30, 1873 .....	\$1,231,887 33
Amount received for money-orders issued.....	74,424,854 71
Amount received for fees.....	461,382 30
Amount received for premiums.....	856 24
Amount received for deposits and drafts.....	60,287,722 44
Amount due postmasters.....	4,812 45
Amount transferred from postage fund.....	610,888 76
Amount transferred from Swiss fund.....	70,616 57
Amount transferred from British fund.....	1,350,373 83
Amount transferred from German fund.....	505,953 29
	<hr/>
	138,949,347 92

DISBURSEMENTS.

Amount of money-orders paid.....	\$73,736,435 01
Amount of money-orders repaid.....	473,721 24
Amount transferred to postage fund.....	531,240 00
Amount transferred to Swiss fund.....	108,652 48
Amount transferred to British fund.....	1,537,839 98
Amount transferred to German fund.....	465,687 78
Amount deposited at first-class offices.....	60,408,730 41
Amount paid for incidental expenses.....	35,251 36
Amount paid for clerk-hire and commissions.....	321,789 06
Miscellaneous items .....	3,467 92
Balance in hands of postmasters June 30, 1874.....	1,326,532 68
	<hr/>
	138,949,347 92

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

No. 8.—Statement showing the revenue which accrued on money-order transactions for the fiscal year ended June 30, 1874.

Total amount of fees received.....	\$461,382 30
Total amount of premiums, &c .....	856 24
	<hr/>
	462,238 54
Commissions and clerk-hire.....	\$321,789 06
Lost remittances .....	1,932 00
Defalcation of late postmaster at Egg Harbor City, N. J.....	429 95
Defalcation of late postmaster at New Orleans, La .....	10,108 37
Incidental expenses.....	22,781 04
Net revenue.....	105,198 12
	<hr/>
	462,238 54

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

No. 9.—Statement showing the transactions of the Money-Order Office of the United States with Switzerland for the fiscal year ended June 30, 1874.

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue.		Transferred from domestic fund.	Balance due post-masters.	Number of orders paid.	Amount of orders paid.	Amount of orders re paid.	Transferred to domestic fund.	Amount paid in Switzerland.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
				Total fees received.												
Alabama.....	3	\$1 58	\$71 00	\$2 25							\$72 00			\$0 08	\$2 75	.....
Arkansas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
California.....	62	1 97	1,606 58	46 25	\$91 00			5	\$112 47	\$3 25	1,624 61			93	4 54	.....
Colorado Territory.....	6	25	160 00	4 25	28 00			1	28 33		164 00				17	.....
Connecticut.....	24	06	670 35	18 50	335 25			20	502 37		520 00				1 79	.....
Delaware.....	2	.....	35 00	1 00							35 00			09	77	\$0 14
District of Columbia.....	32	08	695 04	19 50				2	16 43		698 00			01	19	.....
Florida.....	1	56 32	5 00	25				3	64 08		5 00				56 56	.....
Georgia.....	.....	87	.....	.....	64 08						37				50	.....
Idaho Territory.....	.....	97	.....	.....	.....										97	.....
Illinois.....	253	1 74	5,803 43	163 50	1,559 22		\$0 70	85	2,219 17	50 00	5,254 72			1 85	2 85	.....
Indiana.....	42	97 09	718 50	21 50	958 00			38	959 35	6 75	829 44			90	5 40	.....
Iowa.....	62	2 33	1,385 45	40 00	624 00		08	25	688 81		1,353 00			1 70	1 60	.....
Kansas.....	5	32 14	140 00	3 75	164 19		22	7	163 52		175 00			22	1 26	30
Kentucky.....	32	5 12	872 50	23 75	59 00			4	70 71		889 00				66	.....
Louisiana.....	23	87	554 50	14 50	452 00			14	502 52		518 00			40	95	.....
Maine.....	2	50 00	100 00	2 50							152 00			25	25	.....
Maryland.....	27	76	922 65	24 25	15 00			1	15 12		947 00				54	.....
Massachusetts.....	56	6 26	1,425 86	41 00	385 61			16	367 27		1,530 00				1 46	.....
Michigan.....	53	3 67	866 90	26 75	564 33			21	594 97		852 25				14 43	.....
Minnesota.....	12	43	345 00	9 25	173 10		21	6	172 13		354 00			94	82	10
Mississippi.....	1	.....	8 00	25			02				8 21			02	.....	04
Missouri.....	76	2 02	1,955 25	53 75	1,543 00			59	1,689 84		1,847 00			1 41	15 75	02
Montana Territory.....	.....	.....	.....	.....	.....											.....
Nebraska.....	18	.....	.....	.....	655 00			21	654 77						41	.....
Nevada.....	19	06	327 70	9 50							337 00				26	.....
New Hampshire.....	2	07	100 00	2 50							102 00			25	32	.....
New Jersey.....	78	2 92	2,149 00	58 25	1,050 00			42	1,059 25	90 00	2,097 00			2 73	1 19	.....
New York.....	1,363	61 31	37,906 03	1,056 50	92,469 26		30	178	4,239 46	267 43	36,474 46	\$20,870 92	\$4 50	601 07	5 56	.....
North Carolina.....	1	1 11	10 00	25							10 00			02	1 34	.....
Ohio.....	197	69 05	3,373 31	91 50	2,263 44			79	2,448 19		3,341 00			1 22	5 80	.....
Oregon.....	14	54	484 95	13 00							498 00				53	.....
Pennsylvania.....	191	56 46	3,756 00	100 25	824 90			54	1,320 10		3,395 00			1 46	4 55	.....
Rhode Island.....	0	27	63 55	2 75	44 00		11	1	43 40		65 00				31	.....
South Carolina.....	.....	.....	.....	.....	43 40											.....
Tennessee.....	76	96 07	1,074 40	64 25	330 00		17	16	303 03		2,064 00			1 04	1 49	31
Texas.....	11	46	575 40	7 25	1,011 51			27	1,047 50		2,960 00				1 00	.....

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

Utah Territory	42	64	1,422 75	304 50				1,321 00				93
Vermont		17										17
Virginia	20	1 64	540 65	15 25	38 00	2	38 01	554 00		37	2 99	14
West Virginia	2	1 30	125 25	3 50	164 00	5	163 96	129 00		01	1 08	
Wisconsin	65	1 16	1,294 80	36 50	2,737 41	55	1,502 96	1,953 82		5 20	603 24	63
Wyoming Territory												
Total	2,721	557 42	72,287 28	2,006 50	108,652 48	793	21,232 16	417 43	70,616 57	622 12	745 89	1 68

No. 10.— *Statement of receipts and disbursements of the Money-Order Office with Switzerland for the fiscal year ended June 30, 1874.*

RECEIPTS.

Balance in hands of postmasters June 30, 1873 .....	\$557 42
Amount received for money-orders issued.....	72,287 2
Amount received for fees .....	2,006 50
Amount received from domestic fund .....	108,652 4
Amount due postmasters.....	2 79
	<hr/>
	183,506 47

DISBURSEMENTS.

Amount of money-orders paid .....	\$21,222 16
Amount of money-orders repaid.....	417 43
Amount transferred to domestic fund.....	70,616 57
Amount paid Switzerland.....	89,870 92
Amount paid for incidental expenses .....	9 70
Amount paid for commissions and clerk-hire.....	622 12
Miscellaneous items .....	1 68
Balance in hands of postmasters June 30, 1874 .....	745 89
	<hr/>
	183,506 47

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

No. 11.— *Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June 30, 1870.*

Amount of fees received on orders issued.....	\$127 4
International charges deducted by New York office.....	23 11
	<hr/>
	410 5
Commissions allowed postmasters.....	\$18 18
Net revenue.....	392 33
	<hr/>
	410 5

J. J. MARTIN,  
Auditor

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published, which was incorrect.

No. 12.— *Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June 30, 1871.*

Amount of fees received on orders issued.....	\$227 36
International charges deducted by New York office.....	490 2
	<hr/>
	708 2
Commissions allowed postmasters.....	\$16 72
Net revenue.....	691 58
	<hr/>
	708 2

J. J. MARTIN,  
Auditor

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published which was incorrect.



No. 13.—Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June 30, 1872.

Amount of fees received on orders issued.....	\$981 63
International charges deducted by New York office.....	832 11
	<hr/>
	1,813 74
Commissions allowed postmasters.....	\$26 11
Excess of commissions paid Switzerland.....	327 62
Incidental expenses.....	57 75
Net revenue.....	1,402 26
	<hr/>
	1,813 74

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published, which was incorrect.

No. 14.—Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June 30, 1873.

Amount of fees received on orders issued.....	\$2,164
Commissions allowed postmasters.....	\$19 36
Excess of commissions paid Switzerland.....	622 83
Incidental expenses.....	5 00
Net revenue.....	1,516 81
	<hr/>
	2,164

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published, which was incorrect.

No. 15.—Statement showing the revenue which accrued on money-order transactions with Switzerland for the fiscal year ended June 30, 1874.

Amount of fees received on orders issued.....	\$2,006 50
Commissions and clerk-hire allowed.....	\$622 12
Excess of commissions paid Switzerland.....	493 20
Incidental expenses.....	9 70
Net revenue.....	881 48
	<hr/>
	2,006 50

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

## REPORT OF THE POSTMASTER-GENERAL.

No. 16.—Statement showing the transactions of the Money-Order Office of the United States with the United Kingdom of Great Britain and Ireland for the fiscal year ended June 30, 1874.

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue.		Transferred from domestic fund.	Balance due post-masters.	Number of orders paid.	Amount of orders paid.		Amount of orders repaid.	Transferred to domestic fund.	Amount paid United Kingdom.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
				Total fees received.													
Alabama.....	82	\$0 24	\$1,216 90	\$52 75	\$492 45	\$492 45	\$0 40	31	\$676 46	\$50 00		\$1,683 00			\$0 46	\$2 08	90 74
Arizona Territory.....	32	50 19	1,025 70	27 50	42 63	42 63		2	35 21			1,094 50			2 65	1 70	2 02
Arkansas.....	114	50 72	3,247 20	86 50	121 00	121 00	04	14	291 49			3,212 53			44	60	
California.....	1,911	192 16	39,476 84	1,168 75	2,361 14	2,361 14	18 93	309	6,579 46	113 05		36,304 55			53 12	164 20	3 44
Colorado Territory.....	1,269	74 08	32,364 95	1,883 75	1,76 00	1,76 00	8 36	77	1,464 86	20 00		31,961 42			35 16	50	5 90
Connecticut.....	2,625	499 46	43,847 49	1,362 50	1,794 04	1,794 04	16 44	321	5,306 19	303 55		41,739 05		\$0 50	51 49	53 74	5 41
Dakota Territory.....	6	50 37	130 25	3 75	153 00	153 00		4	154 47			182 00			72	16	
Delaware.....	215		3,616 28	112 75	143 19	143 19	1 24	40	670 41			3,189 29			10 20		3 10
District of Columbia.....	546	42	11,826 82	352 25	121 00	121 00		55	1,027 21	16 89		11,256 00			15 20	2 00	2 65
Florida.....	190	41 27	5,697 43	151 75	297 89	297 89	2 70	22	376 60			5,794 50			20	20 17	
Georgia.....	302	58 60	6,953 62	194 50	674 60	674 60		42	898 15			6,963 80			21 56		
Idaho Territory.....	252	47 52	8,631 22	235 50			11 61		26,540 59	510 29		8,904 00			75 78	259 09	20
Illinois.....	4,619	1,223 17	90,795 90	2,673 00	7,786 89	7,786 89	21 69	1,289	3,761 85	64 94		75,107 77			30 53	108 39	81
Indiana.....	1,332	1,590 37	25,815 76	759 25	2,292 77	2,292 77	47 49	121	3,761 85	50 00		28,538 62		50	26 48	105 05	1 03
Iowa.....	619	527 79	10,824 46	329 75	4,149 73	4,149 73	7 55	264	5,334 15	15 30		10,316 57			22 88	45 39	91
Kansas.....	244	325 25	4,300 02	125 75	6,093 17	6,093 17	2 44	338	7,454 22	57 80		3,307 93			10 87	35 96	13 33
Kentucky.....	314	172 01	6,216 69	184 25	1,227 98	1,227 98	31	81	1,800 31			5,882 97			2 60	132 05	
Louisiana.....	363	48 03	8,735 70	244 25	2,294 00	2,294 00		205	4,525 33			6,662 00			256 95	5 31	55 41
Maine.....	3,282	405 89	107,535 69	2,807 25	1,592 08	1,592 08	41 61	118	2,824 65	67 75		109,172 45			13 65	41 30	4 28
Maryland.....	708	21 85	11,782 10	360 50	345 56	345 56	2 89	129	2,425 65	69 57		9,998 45			683 99	123 76	10 20
Massachusetts.....	10,305	1,336 52	191,074 19	5,777 75	4,828 01	4,828 01	14 16	1,334	24,441 70	544 16		177,244 57		2 25	110 30	55 56	6 79
Michigan.....	2,902	1,415 58	54,769 09	1,622 00	5,750 58	5,750 58	66 69	471	10,063 96	425 53		52,961 80			14 02	68 72	7 29
Minnesota.....	271	287 66	6,847 48	196 00	3,063 90	3,063 90	3 90	195	4,304 30	5 00		5,939 61			4 66	179 51	70
Mississippi.....	97	64 93	2,056 30	58 75	359 93	359 93	6 47	24	489 40			2,055 44			82 77	37	
Missouri.....	1,368	779 35	35,232 98	967 00	2,190 72	2,190 72	11 40	346	8,033 07	62 25		30,843 15			12 60	3 37	45
Montana Territory.....	67	1 30	1,499 10	42 50	32 06	32 06	07	2	13 87	30 00		1,531 00			4 90	28 14	2 15
Nebraska.....	238	135 69	4,014 62	118 75	1,634 51	1,634 51	1 39	131	2,043 97			3,269 27			60 51	80 65	5 98
Nevada.....	351	50 41	7,623 51	230 75	45 08	45 08	3 16	3	62 90			7,855 48			93 71	92 61	13 63
New Hampshire.....	1,046	623 76	22,623 79	647 25	848 40	848 40	6 62	47	1,606 60	77 00		22,978 08			18 96	129 45	23 66
New Jersey.....	4,104	280 42	62,451 12	2,014 25	3,043 36	3,043 36	30 87	891	14,020 43	259 14		52,790 06		1 25	18,419 97	4 80	
New Mexico Territory.....	12		380 75	10 25	52 00	52 00			80,048 14	50 00		300 00			7 53	114 25	1 40
New York.....	19,148	2,854 46	304,927 87	9,570 25	1,451,374 79	1,451,374 79	16 52	4,743	80,048 14	852 74		257,195 25	\$1,410,653 65	401 95	18,419 97	129 45	23 66
North Carolina.....	75	7 60	1,704 45	40 25	1,185 00	1,185 00	71	55	1,314 04			1,020 00			109 71	4 80	
Ohio.....	4,738	1,699 83	65,960 44	2,830 25	7,034 54	7,034 54	60 97	409	16,381 16	184 70		60,843 64		56 50	109 71	114 25	1 40
Oregon.....	145	51 21	4,697 15	139 00	65 63	65 63	49	5	64 82			5,179 76			5 28	509 14	10 02
Pennsylvania.....	8,901	2,771 06	119,000 61	4,451 00	11,714 31	11,714 31	30 42	1,112	42,487 52			141,409 76			423 40		

Rhode Island.....	2,009	48 68	38,750 09	1,171 75	678 00	6 16	257	4,804 38	52 32	35,651 73	.....	.....	.....	65 55	10 56	10 14
South Carolina.....	201	67	7,719 65	1,199 00	212 00	5 10	24	4,479 98	.....	7,637 00	.....	.....	.....	18 61	83	.....
Tennessee.....	359	113 02	8,460 60	241 25	1,007 00	01	115	2,440 08	.....	7,373 00	.....	.....	.....	1 09	6 98	73
Texas.....	366	40 47	8,867 30	245 75	2,122 59	1 57	145	3,470 51	220 00	7,590 88	.....	.....	.....	4 55	34 99	26 75
Utah Territory.....	651	11 12	11,497 35	343 25	643 27	1 37	98	2,351 57	52 50	10,010 14	.....	.....	.....	6 62	75 53	.....
Vermont.....	409	532 06	6,988 62	218 75	377 92	63	26	500 31	26 00	7,542 18	.....	.....	.....	18 66	28 41	49
Virginia.....	674	69 71	15,588 10	435 25	1,549 01	22 94	160	3,319 77	.....	14,315 85	.....	.....	.....	10 24	17 94	1 21
Washington Territory.....	52	23 39	1,756 95	46 00	47 63	1 14	10	232 15	.....	1,638 00	.....	.....	.....	4 96	.....	.....
West Virginia.....	192	78	3,301 47	101 25	176 60	1 02	15	283 86	.....	3,490 67	.....	.....	.....	5 61	.....	98
Wisconsin.....	1,040	872 40	20,917 51	608 25	5,385 75	5 14	255	5,385 63	159 25	22,094 19	.....	.....	.....	42 76	102 25	4 97
Wyoming Territory.....	37	.....	880 00	25 00	73 85	45	3	72 85	.....	904 00	.....	.....	.....	2 37	.....	08
Total.....	77,351	19,454 73	1,491,320 31	44,508 75	1,537,839 98	492 11	15,992	303,773 66	4,632 23	1,350,373 83	1,410,653 65	463 95	20,858 44	2,619 80	241 32	

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

J. J. MARTIN, Auditor.

No. 17.—*Statement of receipts and disbursements of the Money-Order Office with the United Kingdom of Great Britain and Ireland for the fiscal year ended June 30, 1874.*

RECEIPTS.

Balance in hands of postmasters June 30, 1873 .....	\$19,454 7
Amount received for money-orders issued.....	1,491,320 31
Amount received for fees.....	44,502 75
Amount transferred from domestic fund .....	1,537,839 50
Amount due postmasters.....	492 11
	<hr/>
	3,092,615 34

DISBURSEMENTS.

Amount of money-orders paid .....	\$303,773 66
Amount of money-orders repaid .....	4,632 23
Amount transferred to domestic fund.....	1,350,373 83
Amount paid United Kingdom.....	1,410,653 65
Amount paid for incidental expenses .....	462 95
Amount paid for commissions and clerk-hire .....	20,858 44
Miscellaneous items.....	241 32
Balance in hands of postmasters June 30, 1874 .....	2,619 80
	<hr/>
	3,092,615 34

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

No. 18.—*Statement showing the revenue which accrued on money-order transactions with the United Kingdom of Great Britain and Ireland for the fiscal year ended June 30, 1872*

Amount of fees received on orders issued .....	\$22,460 50
Commissions and clerk-hire.....	\$3,626 71
Excess of commissions paid United Kingdom.....	5,943 26
Incidental expenses.....	1,205 15
Net revenue.....	6,691 73
	<hr/>
	22,460 50

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published which was incorrect.

No. 19.—*Statement showing the revenue which accrued on money-order transactions with the United Kingdom of Great Britain and Ireland for the fiscal year ended June 30, 1873*

Amount of fees received on orders issued .....	\$40,504 50
Commissions and clerk-hire.....	\$14,857 78
Excess of commissions paid United Kingdom.....	10,961 42
Incidental expenses .....	629 40
Net revenue.....	14,055 65
	<hr/>
	40,504 50

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published which was incorrect.

States and Territories.	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue.		Transferred from domestic money-order fund.	Balance due post-masters.	Number of orders paid.	Amount of orders paid.	Amount of orders repaid.	Transferred to domestic money-order fund.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
				Total fees received.											
Alabama.....	191	\$0 64	\$5,523 50	\$147 70	\$450 05			30	\$827 58	\$50 00	\$5,242 00			\$2 31	
Arizona Territory.....	7	44	2,995 00	7 50	111 00		\$0 06	4	110 00		303 00			1 00	
Arkansas.....	106	131 60	2,215 25	62 30	137 29			18	431 41	3 00	2,102 23		\$2 35	1 45	
California.....	1,585	108 51	44,892 38	1,213 85	2,912 30		7 30	393	10,494 34	134 00	36,295 25		33 29	174 87	\$2 59
Colorado Territory.....	72	73 08	1,936 75	51 25	876 00		01	53	1,515 42		1,421 00		10	57	
Connecticut.....	449	14 41	8,777 01	242 45	4,216 38		31	226	5,895 97	53 00	7,225 00	\$0 75	10 40	4 76	08
Dakota Territory.....	13	84 13	296 00	7 90	1,354 00			56	1,461 84	7 00	258 00		4 38	21	
Delaware.....	34	21 00	567 40	16 20	109 52		20	6	172 55		540 00		1 84		02
District of Columbia.....	432	36	10,428 66	281 25	475 00			145	4,070 09	185 00	6,930 00			18	
Florida.....	53	1 13	1,826 50	47 40	150 50		29	2	203 43		1,814 75		5 07	2 32	19
Georgia.....	215	2 52	6,158 91	163 50	387 67			22	546 12	131 00	5,878 41		05	157 02	
Idaho Territory.....	18	32	494 75	13 05	379 11		32	12	367 81	50 00	466 93	25	2 15	41	
Illinois.....	3,325	343 36	64,488 49	1,778 15	38,114 26		66 97	2,694	71,854 62	572 60	32,027 89	6 50	118 65	202 69	8 28
Indiana.....	727	244 83	12,857 02	360 15	10,680 50		4 04	459	12,466 99	51 00	11,449 58	50	25 59	91 62	61 26
Iowa.....	648	615 24	12,379 39	342 35	21,557 81		9 49	867	24,020 07	262 00	10,327 92	5 15	58 29	225 16	5 69
Kansas.....	116	57 19	2,398 75	66 05	6,138 33		2 41	247	6,805 55	10 00	1,832 40		11 23	1 68	1 87
Kentucky.....	299	125 75	6,900 92	185 65	2,976 73		35	194	5,136 78	15 00	5,012 68		7 74	16 24	96
Louisiana.....	196	97 47	4,063 85	113 20	4,833 00		08	275	7,240 35	75 00	1,650 25			141 02	
Maine.....	112	1 31	3,801 00	97 85	187 28			11	266 24	5 00	3,814 75		21	1 24	
Maryland.....	1,397	90	29,307 89	801 80	778 47		1 13	371	8,405 96	227 00	22,247 42	2 90	5 83	24	84
Massachusetts.....	1,032	121 85	25,245 91	684 70	1,409 52		34	273	5,846 08	149 25	21,321 00		104 10	40 98	91
Michigan.....	1,251	113 51	23,960 55	669 10	16,659 60		8 93	960	26,112 28	220 18	14,963 37	2 25	48 33	82 81	2 47
Minnesota.....	407	244 93	7,140 36	198 00	24,725 16		15 76	947	26,221 13	89 40	5,640 58	65	64 01	303 56	4 88
Mississippi.....	41	6 52	898 00	24 65	521 56		30	22	618 89		829 01		2 05	94	14
Missouri.....	820	225 20	17,238 11	475 20	14,353 96		6 49	985	25,845 99	176 75	6,082 04	3 00	82 51	105 23	3 44
Montana Territory.....	70	78	2,181 25	56 20	2,209 12		97	10	245 64	15 00	2,184 72		1 49	1 41	
Nebraska.....	148	17 17	2,822 85	77 90	10,197 56		4 14	388	10,787 24	27 00	2,235 76	15	23 66	41 80	4 01
Nevada.....	134	60	4,495 20	118 65	429 52		52	19	518 27		4,523 00		2 54	68	
New Hampshire.....	80	90	1,681 50	46 45	44 00		77	5	130 36		1,635 32		4 50	1 91	1 53
New Jersey.....	1,057	89 53	20,088 20	563 75	13,848 77		8 89	849	21,971 33	151 00	12,392 89	1 75	45 51	35 51	1 24
New Mexico Territory.....	11		430 00	11 00	223 00		04	8	212 91		390 00		1 60		59 53
New York.....	9,355	114 14	206,239 74	5,709 15	203,601 39		1 57	5,079	122,524 28	722 58	148,824 70	91 90	6,085 94	48 98	1 62
North Carolina.....	207	3 13	7,255 55	188 45	286 00		3 50	24	625 38		7,086 00		19 68	2 60	2 97
Ohio.....	2,648	404 60	56,049 32	1,535 25	13,056 67		5 09	1,201	30,733 81	400 00	39,631 68	1 00	60 94	214 35	9 15
Oregon.....	169	1 36	4,656 10	126 55	373 10			24	663 68	5 65	4,464 50		1 88	21 40	
Pennsylvania.....	2,253	197 81	44,085 84	1,216 75	19,525 22		8 45	1,411	35,498 28	434 50	28,784 00	2 75	79 24	236 49	8 81
Rhode Island.....	149	74	3,241 45	87 70	179 00			15	363 06	15 05	3,126 00	25	3 28	1 25	
South Carolina.....	34	76	812 25	23 45	575 00		76	30	727 77		681 00		2 09	36	

No. 20.—Statement showing the transactions of the Money-Order Office of the United States with the German Empire, &c.—Continued.

States and Territories	Number of orders issued.	Balance from last year.	Amount of orders issued.	Revenue.		Transferred from domestic money-order fund.	Balance due post-masters.	Number of orders paid.	Amount of orders paid.	Amount of orders repaid.	Transferred to domestic money-order fund.	Amount paid German Empire.	Expenses.	Commissions and clerk-hire.	Balance due the United States.	Miscellaneous items.
				Total fees received.												
Tennessee .....	150	\$41 98	\$3,018 53	\$83 55		\$2,232 00	\$0 19	108	\$2,951 68	\$5 00	\$2,380 00		\$0 15	\$1 70	\$27 64	\$0 08
Texas .....	482	59 74	12,905 09	350 25		5,954 48	4 91	321	9,022 21		9,779 61			26 16	442 63	3 86
Utah Territory .....	43	97	1,290 50	33 15		791 09		29	817 57		1,296 75			91	32	16
Vermont .....	2	05	14 75	65		121 13		7	190 40		14 00			34	1 61	26
Virginia .....	290	76 05	7,363 28	199 65		1,731 88		90	2,462 83	30 00	6,847 43		75	4 49	25 54	32
Washington Territory .....	38	41	761 75	21 15		640 84		25	702 42		717 00			3 67	1 06	
West Virginia .....	136	1 00	2,710 60	74 00		866 08		44	1,144 01	61 00	2,444 00			1 40	1 27	
Wisconsin .....	1,499	541 82	25,118 63	707 10		38,504 92	17 13	1,650	45,691 44	240 75	18,465 50		90	98 12	383 87	9 02
Wyoming Territory .....	11	64	300 00	8 00		366 00		12	364 66		308 00			1 66	32	
Total .....	32,542	4,190 38	701,634 73	19,288 95		468,241 77	182 33	20,607	535,216 72	4,573 71	505,953 29	\$137,365 99	121 55	7,059 95	3,050 17	196 78

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT.  
Washington, D. C., October 10, 1874.

No. 21.—*Statement of the receipts and disbursements of the Money-Order Office with the German Empire for the fiscal year ended June 30, 1874.*

RECEIPTS.

Balance in hands of postmasters June 30, 1873 .....	\$4,190 38
Amount received for money-orders issued .....	701,634 73
Amount received for fees .....	19,288 95
Amount transferred from domestic fund.....	468,241 77
Balance due postmasters.....	182 33
	<hr/>
	1,193,538 16

DISBURSEMENTS.

Amount of money-orders paid .....	\$535,216 72
Amount of money-orders repaid.....	4,573 71
Amount transferred to domestic fund.....	505,953 29
Amount paid German Empire.....	137,365 99
Amount paid for incidental expenses .....	121 55
Amount paid for commissions and clerk-hire.....	7,059 95
Miscellaneous items .....	196 78
Balance in the hands of postmasters June 30, 1874.....	3,050 17
	<hr/>
	1,193,538 16

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

No. 22.—*Statement showing the revenue which accrued on money-order transactions with the German Empire for the fiscal year ended June 30, 1873.*

Amount of fees received on orders issued .....	\$11,662 80
Commissions and clerk-hire.....	\$1,377 50
Excess of commissions paid German Empire .....	2,173 92
Incidental expenses .....	316 15
Net revenue.....	7,795 23
	<hr/>
	11,662 80

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
Washington, D. C., October 10, 1874.

NOTE.—This statement to take the place of like statement heretofore published, which was incorrect.



No. 23.—Amount of letter-postage on British mails received in and sent from the United States during the fiscal year ended June 30, 1874.

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Cunard line .....	\$12,378 70	\$18,109 78	.....	\$148,684 82	\$179 17
Dale, or Inman line .....	8,177 59	12,393 36	.....	95,880 19	116,451
North German Lloyd, of Bremen .....	6,710 20	9,663 79	.....	54,844 03	71,218
Canadian line .....	1 06	1 34	.....	107 00	109
White Star line.....	133 62	13 42	.....	955 36	1,102
Liverpool and Great Western Steam Company.....	.....	1-32	.....	2 02	3
National line .....	.....	1 26	.....	42	171
American Steamship Company.....	19 30	.....	.....	7 02	2
Hamburg-American Packet Company...	12 74	88	.....	1 12	14
Total.....	27,433 21	40,185 15	.....	300,482 04	368,100
Amount received.....	67,618 36	.....	\$300,482 04	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Cunard line .....	\$2,360 54	\$67,692 47	.....	\$3,762 70	\$73,815
Dale, or Inman line .....	233 00	4,222 39	.....	270 34	4,725
North German Lloyd, of Bremen .....	3,576 00	26,112 04	.....	1,814 56	31,502
Canadian line .....	.....	16,941 14	.....	626 80	17,567
White Star line .....	5,575 62	95,524 57	.....	6,316 58	107,416
Liverpool and Great Western Steam Company.....	1,178 40	114,799 71	.....	8,092 56	124,000
Eagle line.....	52 40	3,284 16	.....	232 04	3,568
American Steamship Company .....	.....	936 08	.....	58 88	994
Hamburg-American Packet Company ...	4,778 43	52,532 06	.....	5,626 58	62,937
Total.....	17,754 39	382,044 62	.....	26,731 04	426,530
Amount sent.....	399,799 01	.....	.....	26,731 04	.....

Amount collected in the United States.....	\$467,417
Amount collected in the United Kingdom.....	327,213
Total.....	794,630
Excess collected in the United States.....	140,204
Increase compared with last fiscal year.....	23,699

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 24.—Amount of letter-postage on German mails received in and sent from the United States during the fiscal year ended June 30, 1874.

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Cunard line, via England.....	\$2, 246 73	\$7, 445 41	.....	\$12, 417 39	\$22, 109 53
Dale line, via England .....	2, 839 48	10, 927 27	.....	12, 337 81	26, 104 56
North German Lloyd, of Bremen, via England.....	2, 744 22	8, 558 26	.....	14, 154 45	25, 456 93
Hamburg-American Packet Company, via France .....	1, 241 85	4, 039 08	.....	3, 527 17	8, 808 10
North German Lloyd of Bremen, direct..	1, 592 27	4, 238 35	.....	39, 538 31	45, 368 93
Hamburg-American Packet Company, direct .....	2, 104 96	6, 320 40	.....	49, 514 95	57, 940 31
Eagle line, direct from Hamburg.....	26 74	84 50	.....	640 20	751 44
Baltic Lloyd, direct from Stettin.....	.....	4 44	.....	7 68	12 12
Total.....	12, 796 25	41, 617 71	.....	132, 137 96	186, 551 92
Amount received.....	54, 413 96	.....	\$132, 137 96	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Cunard line, via England.....	\$327 61	\$7, 608 32	.....	\$376 89	\$8, 812 22
Liverpool and Great Western Steam Company, via England .....	171 54	20, 895 14	.....	2, 826 93	23, 893 61
North German Lloyd, of Bremen, via England.....	1, 517 61	26, 662 76	.....	1, 337 59	29, 517 96
Hamburg-American Packet Company, via England .....	1, 435 86	12, 372 55	.....	4, 215 97	18, 024 38
Eagle line, via England .....	49 45	1, 783 13	.....	1, 369 06	3, 201 64
North German Lloyd, of Bremen, direct..	1, 121 82	60, 026 57	.....	7, 458 61	62, 607 00
Hamburg-American Packet Company, direct .....	736 10	49, 321 21	.....	5, 416 14	55, 473 45
Eagle line, direct to Hamburg.....	31 52	4, 903 87	.....	789 86	5, 725 25
Baltic Lloyd, direct to Stettin .....	.....	3 12	.....	72	3 84
Total.....	5, 391 51	183, 576 67	.....	24, 291 77	213, 259 95
Amount sent.....	188, 968 18	.....	.....	24, 291 77	.....

Amount collected in the United States.....	\$243, 382 14
Amount collected in Germany.....	156, 429 73
Total .....	399, 811 87

Excess collected in the United States.....	86, 952 41
Decrease compared with last fiscal year.....	77, 384 51

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
October 10, 1874.

No. 25.—Amount of letter-postage collected on French mails received in and sent from the United States during the fiscal year ended June 30, 1874.

RECEIVED.

Lines.	Unpaid distributed.	Unpaid.	Paid.	Paid distributed.	Total.
Hamburg-American Packet Company...	\$1,110 60	\$1,531 50	.....	.....	\$2,642 10
French Steamship Company.....	3,442 80	3,418 30	.....	.....	6,861 10
Baltic Lloyd.....	2 10	14 00	.....	.....	16 10
North German Lloyd, of Bremen.....	59 40	80 00	.....	.....	139 40
Total.....	4,614 90	5,043 80	.....	.....	9,658 70
Amount received.....	.....	9,658 70	.....	.....	.....

SENT.

Lines.	Paid distributed.	Paid.	Paid stamps.	Unpaid.	Total.
Hamburg-American Packet Company...	\$3,402 10	\$180 80	.....	.....	\$3,582 90
French Steamship Company.....	2,540 40	.....	.....	.....	2,540 40
Eagle line.....	337 90	6 00	.....	.....	343 90
Total.....	.....	186 80	.....	.....	6,467 20
Amount sent.....	6,280 40	6,467 20	.....	.....	.....

Amount collected in the United States.....	\$16,125 90
Amount collected in France.....	Unknown
Total collected in the United States.....	16,125 90
Decrease compared with last fiscal year.....	1,216 70
No postal convention in operation with France during the fiscal year.	

J. J. MARTIN.  
Auditor

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 26.—Amount of letter-postage collected on Belgian mails received in and sent from the United States during the fiscal year ended June 30, 1874.

## RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Cunard line .....	\$164 63	\$357 98	.....	\$2,344 62	\$2,867 23
Dale, or Inman line.....	137 17	373 18	.....	1,724 66	2,235 01
North German Lloyd, of Bremen.....	147 14	308 28	.....	1,664 97	1,120 39
Red Star line.....	2 70	25 12	.....	200 60	228 42
Baltic Lloyd .....	30	24	.....	18	72
Total.....	451 94	1,064 80	.....	5,935 03	7,451 77
Amount received.....	1,516 74	.....	\$5,935 03	.....	.....

## SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Liverpool and Great Western Steam Company.....	\$19 81	\$900 90	.....	\$708 52	\$1,629 23
North German Lloyd, of Bremen.....	161 14	1,810 52	.....	454 56	2,426 22
Hamburg American Packet Company...	118 88	1,018 54	.....	293 76	1,431 18
Eagle line.....	3 52	165 22	.....	51 92	220 66
Cunard line .....	27 52	624 97	.....	132 40	784 89
Red Star line.....	.....	26 90	.....	1 50	28 40
Baltic Lloyd .....	.....	16 20	.....	.....	16 20
French, Edge & Co.'s line .....	.....	3 84	.....	.....	3 84
Total.....	330 87	4,567 09	.....	1,642 66	6,540 62
Amount sent .....	4,897 96	.....	.....	1,642 66	.....

Amount collected in Belgium ..... \$7,577 69  
Amount collected in the United States..... 6,414 70

Total ..... 13,992 39

Excess collected in Belgium..... 1,162 99  
Decrease compared with last fiscal year ..... 630 46

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 27.—Amount of letter-postage on Netherlands mails received in and sent from the United States during the fiscal year ended June 30, 1874.

RECEIVED.

Lines.	Unpaid distributed.	Unpaid.	Paid.	Paid distributed.	Total.
Cunard line .....	\$670 55	\$47 10	\$2, 634 22	.....	\$3, 351 87
Dale, or Inman line.....	1, 023 70	63 30	2, 853 52	.....	3, 940 52
North German Lloyd, of Bremen.....	834 15	58 55	2, 455 41	.....	3, 348 11
Total.....	2, 528 40	168 95	7, 943 15	.....	10, 640 50
Amount received.....		2, 697 35	7, 943 15	.....	

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Liverpool and Great Western Steam Company.....		\$2, 536 40	.....	\$498 86	\$3, 035 26
North German Lloyd, of Bremen.....		3, 594 30	.....	546 13	4, 140 73
Hamburg-American Packet Company .....		2, 377 20	.....	366 78	2, 743 98
Eagle line .....		343 70	.....	64 26	407 96
Cunard line .....		1, 003 70	.....	157 65	1, 161 35
Total.....		9, 855 30	.....	1, 633 68	11, 488 98
Amount sent .....	\$9, 855 30		.....	1, 633 68	

Amount collected in the United States.....	\$12, 552 65
Amount collected in the Netherlands .....	9, 576 83
Total .....	22, 129 48
Excess collected in the United States.....	2, 975 82
Increase compared with last fiscal year.....	17 00

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 28.—*Amount of letter-postage on Italian mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

## RECEIVED.

Lines.	Unpaid distributed.	Unpaid.	Paid.	Paid distributed.	Total.
Cunard line .....	\$1,881 50	\$1,040 93	\$5,273 84	.....	\$8,196 27
Dale, or Inman line.....	1,445 15	961 40	4,100 86	.....	6,507 41
North German Lloyd, of Bremen.....	2,548 11	1,591 78	6,257 74	.....	10,397 63
Total .....	5,874 76	3,594 11	15,632 44	.....	25,101 31
Amount received.....	.....	9,468 87	15,632 44	.....	.....

## SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Liverpool and Great Western Steam Company.....	.....	\$5,361 10	.....	\$511 39	\$5,872 49
North German Lloyd, of Bremen .....	.....	6,478 50	.....	610 39	7,088 89
Hamburg-American Packet Company .....	.....	3,159 06	.....	272 40	3,431 46
Cunard line .....	.....	2,329 70	.....	207 10	2,536 80
Eagle line .....	.....	839 10	.....	77 50	916 60
Total.....	.....	18,167 46	.....	1,678 78	19,846 24
Amount sent .....	\$18,167 46	.....	.....	1,678 78	.....

Amount collected in the United States.....	\$27,636 33
Amount collected in Italy .....	17,311 22
Total .....	44,947 55
Excess collected in the United States.....	10,325 11
Increase compared with last fiscal year.....	7,517 40

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 29.—Amount of letter-postage collected on Switzerland mails received in and sent from the United States during the fiscal year ended June 30, 1874.

RECEIVED.					
Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Cunard line, via England.....	\$235 51	\$1, 502 60	.....	\$5, 921 08	\$7, 659 19
Dale line, via England.....	134 90	1, 335 10	.....	4, 892 62	6, 362 12
North German Lloyd, of Bremen, via England.....	124 05	780 15	.....	3, 539 63	4, 443 83
North German Lloyd, of Bremen, direct, service, via Bremen .....	2 08	41 60	.....	735 52	779 20
Hamburg-American Packet Company, direct service, via Hamburg.....	2 91	36 72	.....	868 00	907 63
Total.....	499 45	3, 696 17	.....	15, 956 85	20, 152 47
Amount received.....	4, 195 62	.....	\$15, 956 85	.....	.....

SENT.					
Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Liverpool and Great Western Steam Company, via England .....	.....	\$3, 819 70	.....	\$1, 011 43	\$4, 831 13
North German Lloyd, of Bremen, via England.....	.....	4, 835 10	.....	1, 072 66	5, 907 76
Hamburg-American Packet Company, by England .....	.....	2, 954 51	.....	708 16	3, 662 67
Eagle line, via England.....	.....	572 20	.....	146 69	718 89
Cunard line, via England .....	.....	1, 491 70	.....	324 23	1, 816 93
North German Lloyd, of Bremen, direct service, via Bremen .....	.....	842 96	.....	86 00	929 96
Hamburg-American Packet Company, direct service, via Hamburg .....	.....	691 20	.....	70 16	761 36
Eagle line, direct, via Hamburg .....	.....	74 16	.....	10 40	84 56
Total.....	.....	15, 281 53	.....	3, 429 75	18, 711 28
Amount sent.....	15, 281 53	.....	.....	3, 429 75	.....

Amount collected in the United States.....	\$19, 477 17
Amount collected in Switzerland.....	19, 386 00
Total .....	38, 863 17
Excess collected in the United States.....	90 57
Increase compared with last fiscal year.....	1, 936 00

J. J. MARTIN.  
*Auditor*

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.



No. 30.—*Amount of letter-postage collected on Danish mails received in and sent from the United States during the fiscal year ended June 30, 1874.*

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Hamburg-American Packet Company...	\$211 54	\$1, 224 85	.....	\$4, 484 08	\$5, 920 47
North German Lloyd, of Bremen .....	213 15	1, 062 72	.....	3, 283 76	4, 559 63
Total.....	424 69	2, 287 57	.....	7, 767 84	10, 480 10
Amount received.....	2, 712 26	.....	\$7, 767 84	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Hamburg-American Packet Company.....	.....	\$5, 397 38	.....	\$586 77	\$5, 984 15
North German Lloyd, of Bremen.....	.....	3, 188 55	.....	617 68	3, 806 23
Eagle line .....	.....	213 99	.....	58 70	272 69
Baltic Lloyd.....	.....	21	.....	.....	21
Total.....	.....	8, 800 13	.....	1, 263 15	10, 063 28
Amount sent.....	\$8, 800 13	.....	.....	1, 263 15	.....

Amount collected in the United States .....	\$11, 512 39
Amount collected in Denmark.....	9, 030 99
Total.....	20, 543 38
Excess collected in the United States.....	2, 481 40
Decrease compared with last fiscal year.....	9, 272 57

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.  
21 P M G

No. 31.—Amount of letter-postage collected on Norwegian mails received in and sent from the United States during the fiscal year ended June 30, 1874.

RECEIVED.

Lines.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
Hamburg-American Packet Company, via Hamburg.....	\$623 27	\$3,746 94	.....	\$4,195 37	\$2,562 5
North German Lloyd, of Bremen, via Bremen and England.....	545 98	3,275 83	.....	3,893 00	7,714 8
Funch, Edye & Co.'s line, (direct).....	5 22	22 05	.....	138 32	165 5
Dale, or Inman line, via England.....	7 35	23 90	.....	31 80	63 8
Cunard line, via England.....	23 30	123 65	.....	161 10	308 5
Total.....	1,205 12	7,192 37	.....	8,419 59	16,917 0
Amount received.....	8,397 49	.....	\$8,419 59	.....	.....

SENT.

Lines.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
Hamburg-American Packet Company, via Hamburg.....	.....	\$8,631 64	.....	\$1,862 61	\$10,494 2
Eagle line, via Hamburg.....	.....	275 80	.....	177 40	453 2
North German Lloyd, of Bremen, via England.....	.....	2,803 97	.....	764 70	3,568 7
North German Lloyd, of Bremen, via Bremen.....	.....	2,246 00	.....	568 50	2,814 5
White Star line, via England.....	.....	414 40	.....	22 05	436 4
Funch, Edye & Co.'s line, (direct service).....	.....	30 60	.....	.....	30 6
Total.....	.....	14,402 41	.....	3,335 26	17,737 7
Amount sent.....	\$14,402 41	.....	.....	3,395 26	.....

Amount collected in the United States.....	\$22,799 4
Amount collected in Norway.....	11,814 5
Total.....	34,614 7

Excess collected in the United States.....	10,955 5
--	----------

Postal convention with Norway went into effect July 1, 1873.

J. J. MARTIN.  
Auditor

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 32.—Amount of letter-postage collected on Swedish mails received in and sent from the United States during the fiscal year ended June 30, 1874.

RECEIVED.

Lines.	Unpaid.	Unpaid, dis-tributed.	Paid.	Paid, dis-tributed.	Total.
Hamburg-American Packet Company, via Hamburg.....	\$1,260 73	\$9,839 09		\$1,626 20	\$12,726 02
North German Lloyd, of Bremen, via Bremen.....	841 49	6,401 07		914 92	8,157 48
North German Lloyd, of Bremen, via England.....	529 18	3,701 46		865 58	5,096 22
Eagle Line, via Hamburg.....	39 06	225 06		40 68	304 80
Dale, or Inman Line, via England.....	94 07	729 37		124 49	947 93
Cunard Line, via England.....	73 43	574 00		122 12	769 55
Total.....	2,837 96	21,470 05		3,693 99	28,002 00
Amount received.....	24,308 01		\$3,693 99		

SENT.

Lines.	Paid.	Paid dis-tributed.	Paid, stamps.	Unpaid.	Total.
Hamburg-American Packet Company, via Hamburg.....		\$11,380 00		\$3,920 80	\$15,300 80
Eagle Line, via Hamburg.....		504 90		332 92	837 82
North-German Lloyd, of Bremen, via England.....		3,646 04		1,565 34	5,211 38
White Star Line, via England.....		396 37		16 94	413 31
North German Lloyd, of Bremen, via Bremen.....		2,411 00		964 82	3,375 82
Total.....		18,338 31		6,800 82	25,139 13
Amount sent.....	\$18,338 31			6,800 82	

Amount collected in the United States.....	\$42,646 32
Amount collected in Sweden.....	10,494 81
Total.....	53,141 13

Excess collected in the United States.....	32,151 51
Postal convention with Sweden went into effect July 1, 1873.	

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
October 10, 1874.

No. 33.—Amount of letter-postage collected on European mails received in and sent from the United States during the fiscal year ended June 30, 1874.

RECEIVED.

Countries.	Unpaid.	Unpaid distributed.	Paid.	Paid distributed.	Total.
The United Kingdom of Great Britain and Ireland .....	\$27,433 21	\$40,185 15	.....	\$300,482 04	\$362,100 4-
Germany .....	12,796 23	41,617 71	.....	132,137 96	186,551 92
France .....	5,043 80	4,614 90	.....	.....	9,658 70
Belgium .....	451 94	1,064 80	.....	5,935 03	7,451 77
Netherlands .....	168 95	2,528 40	.....	7,943 15	10,640 50
Italy .....	3,594 11	5,874 76	.....	15,632 44	25,101 31
Switzerland .....	499 45	3,696 17	.....	15,956 85	20,152 47
Denmark .....	424 69	2,287 57	.....	7,767 84	10,480 10
Norway .....	1,205 12	7,192 37	.....	8,419 59	16,817 08
Sweden .....	2,837 96	21,470 05	.....	3,693 99	28,002 00
Total .....	54,455 48	130,531 88	.....	497,968 89	\$62,956 2-
Amount received .....	184,987 36	.....	\$497,968 89	.....	.....

SENT.

Countries.	Paid.	Paid distributed.	Paid stamps.	Unpaid.	Total.
The United Kingdom of Great Britain and Ireland .....	\$17,754 39	\$382,044 62	.....	\$26,731 04	\$426,530 05
Germany .....	5,391 51	183,576 67	.....	24,291 77	213,259 95
France .....	186 80	6,200 40	.....	.....	6,387 20
Belgium .....	330 87	4,567 09	.....	1,642 66	6,540 62
Netherlands .....	.....	9,855 30	.....	1,633 68	11,488 98
Italy .....	.....	18,167 46	.....	1,678 78	19,846 24
Switzerland .....	.....	15,281 53	.....	3,429 75	18,711 28
Denmark .....	.....	8,800 13	.....	1,263 15	10,063 28
Norway .....	.....	14,402 41	.....	3,395 26	17,797 67
Sweden .....	.....	18,338 31	.....	6,800 82	25,139 14
Total .....	23,663 57	661,313 92	.....	70,866 91	755,844 40
Amount sent .....	\$684,977 49	.....	.....	70,866 91	.....

Amount collected in the United States.....\$360,964 4-  
Amount collected in European countries.....568,835 40

Total .....1,432,800 40

Excesses collected in the United States .....301,129 06  
Increase compared with last fiscal year .....32,243 16

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 34.—Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and the United Kingdom in British mails during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.			
	Received.		Sent.		Received.		Sent.	
	Rates.	Wt. in ozs.	Rates.	Wt. in ozs.	Lbs. Ozs.	Lbs. Ozs.		
Cunard line.....	2, 797, 224	891, 695½	1, 101, 369	350, 600½	373, 331 02	85, 039 01		
Dale, or Inman line .....	1, 825, 253	582, 416	74, 736	24, 780½	196, 112 09½	5, 531 03½		
North German Lloyd, of Bre- men .....	1, 123, 935	342, 029½	368, 377	115, 920½	139, 102 14	32, 508 05½		
Canadian line.....	1, 806	645½	282, 612	88, 103½	3 05½	24, 172 11½		
White Star line .....	16, 922	5, 709	1, 638, 773	541, 492½	115 01	129, 375 10½		
Liverpool and Great West- ern Steam Company .....	60	20½	1, 888, 141	613, 131½	.....	146, 903 09½		
National line.....	17	6½	.....	.....	.....	.....		
American Steamship Com- pany.....	330	109½	15, 528	5, 140	12	1, 849 03		
Hamburg-American Packet Company .....	119	37	891, 796	290, 574½	.....	71, 670 05		
Eagle line.....	.....	.....	42, 502	12, 852	.....	2, 363 03		
Total .....	5, 765, 732	1, 822, 668½	6, 303, 834	2, 042, 596½	708, 665 12½	499, 413 04½		
Increase compared with last fiscal year .....	47, 182	5, 806½	189, 268	52, 618½	45, 076 08½	22, 439 13		

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 35.—Number and weight of letters and weight of newspapers, &c., (including postal cards,) exchanged between the United States and Germany, in closed mails, through England and France, and by direct steamer, during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	Grams.	Rates.	Grams.	Grams.	Grams.
Cunard line, via England ...	236, 628	2, 338, 275	110, 818	1, 083, 074	2, 048, 993	905, 422
Dale, or Inman line, via Eng- land .....	267, 432	2, 643, 975	.....	.....	1, 845, 961	.....
North German Lloyd, of Bre- men, via England.....	273, 866	2, 718, 378	380, 402	2, 887, 464	2, 790, 095	5, 241, 875
Hamburg-American Packet Company, via France .....	85, 777	720, 974	.....	.....	1, 113, 595	.....
Hamburg-American Packet Company, via England....	.....	.....	229, 195	2, 264, 623	.....	1, 422, 079
North German Lloyd, of Bre- men, direct.....	711, 321	6, 851, 043	1, 043, 191	10, 230, 075	9, 210, 824	33, 355, 254
Hamburg-American Packet Company, direct .....	229, 535	8, 619, 209	858, 755	8, 388, 850	10, 448, 069	27, 484, 648
Baltic Lloyd, direct.....	165	1, 594	58	634	193	26, 939
Eagle line, direct .....	11, 493	110, 367	86, 065	848, 007	106, 295	2, 210, 433
Liverpool and Great West- ern Steam Company, via England .....	.....	.....	302, 331	2, 962, 764	.....	2, 322, 490
Eagle line, via England....	.....	.....	38, 616	420, 688	.....	263, 324
Total .....	2, 476, 217	24, 072, 815	3, 049, 431	29, 136, 179	27, 564, 025	73, 232, 564
Compared with { Decrease last fiscal year: { Increase .....	252, 676	1, 605, 290	393, 672	3, 752, 187	3, 531, 977	2, 932, 307

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 36.—Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and France during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	Grams.	Rates.	Grams.	Grams.	Grams.
Hamburg-American Packet Co .....	26, 421	204, 524	34, 921	389, 984	29, 327	9, 215, 94
French Steamship Company .....	68, 611	534, 235	25, 404	253, 817	1, 148, 879	1, 959, 62
North German Lloyd, of Bremen .....	1, 394	9, 376	.....	.....	162	.....
Eagle line .....	.....	.....	3, 409	37, 449	.....	780, 54
Baltic Lloyd .....	161	1, 414	.....	.....	.....	.....
Total .....	96, 587	749, 549	63, 734	681, 250	1, 178, 422	11, 955, 49
Compared with last fiscal year: { Decrease .....	7, 826	53, 243	4, 632	65, 911	.....	.....
..... { Increase .....	.....	.....	.....	.....	213, 083	517, 72

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 37.—Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Belgium during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	Grams.	Rates.	Grams.	Grams.	Grams.
Cunard line .....	32, 167	281, 131	9, 393	91, 267	983, 920	273, 22
North German Lloyd, of Bremen .....	23, 777	196, 919	22, 313	268, 114	932, 582	942, 32
Red Star line, direct .....	3, 701	28, 242	490	3, 934	2, 429	1, 04
Baltic Lloyd, direct .....	8	73	270	2, 290	.....	5, 38
Dale, or Inman line .....	24, 669	212, 522	.....	.....	761, 454	.....
Liverpool and Great Western Steam Company .....	.....	.....	19, 228	181, 545	.....	332, 94
Hamburg-American Packet Co .....	.....	.....	16, 834	167, 135	.....	262, 17
Eagle line .....	.....	.....	2, 605	24, 296	.....	72, 21
Funch, Edye & Co.'s line .....	.....	.....	64	660	.....	.....
Total .....	84, 322	718, 887	77, 197	739, 941	2, 680, 521	2, 942, 88
Increase compared with last fiscal year .....	19, 845	162, 027	4, 029	55, 364	747, 970	224, 22

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 33.—Number and weight of letters and weight of newspapers, &c., exchanged between the United States and the Netherlands during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	Grams.	Rates.	Grams.	Grams.	Grams.
Cunard line.....	30, 938	291, 581	11, 651	110, 894	599, 837	162, 766
North German Lloyd, of Bremen....	30, 539	277, 500	41, 455	395, 206	548, 995	923, 853
Dale, or Inman line.....	35, 618	333, 015	.....	.....	565, 965	.....
Liverpool and Great Western Steam Company.....	.....	.....	30, 368	290, 379	.....	472, 308
Hamburg-American Packet Co.....	.....	.....	27, 210	268, 898	.....	339, 420
Eagle line.....	.....	.....	4, 091	36, 870	.....	57, 353
Total.....	97, 095	902, 076	114, 773	1, 092, 247	1, 714, 797	1, 955, 700
Compared with { Increase.....	7, 281	82, 911	.....	.....	451, 129	77, 721
last fiscal year: { Decrease.....	.....	.....	5, 987	158, 314	.....	.....

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 39.—Number and weight of letters and weight of newspapers, &c., exchanged between the United States and Switzerland, in closed mails, via England and Belgium, and by direct steamer, via Bremen and Hamburg, during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	Grams.	Rates.	Grams.	Grams.	Grams.
Cunard line, via England.....	71, 065	581, 231	18, 182	165, 345	746, 061	382, 604
Dale, or Inman line, via England.....	59, 523	474, 937	.....	.....	382, 747	.....
North German Lloyd, of Bremen, via England.....	41, 220	339, 332	59, 132	535, 544	516, 752	1, 781, 087
Liverpool and Great Western Steam Company, via England.....	.....	.....	48, 530	444, 851	.....	1, 093, 369
Hamburg-American Packet Company, via England.....	.....	.....	36, 683	338, 465	.....	802, 220
Eagle line, via England.....	.....	.....	7, 200	62, 930	.....	139, 523
North German Lloyd, of Bremen, via Bremen.....	9, 535	92, 879	11, 637	115, 985	773, 248	1, 089, 459
Hamburg-American Packet Company, via Hamburg.....	11, 106	90, 784	9, 519	87, 265	979, 672	861, 610
Eagle line, via Hamburg.....	.....	.....	1, 057	9, 950	.....	87, 588
Total.....	192, 449	1, 579, 163	191, 940	1, 760, 335	3, 398, 480	6, 237, 460
Increase compared with last fiscal year.....	11, 108	100, 392	10, 726	182, 034	239, 659	689, 468

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.



No. 40.—Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Italy during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	Grams.	Rates.	Grams.	Grams.	Grams.
Cunard line.....	67, 613	492, 330	25, 243	210, 390	657, 602	54, 12
Dale, or Inman line.....	53, 682	403, 756	.....	.....	701, 536	.....
North German Lloyd, of Bremen	84, 927	617, 222	70, 351	579, 966	910, 474	1, 22, 92
Liverpool and Great Western	.....	.....	58, 332	487, 151	.....	1 24, 27
Steam Company.....	.....	.....	34, 080	289, 920	.....	97, 2
Hamburg-American Packet Co..	.....	.....	9, 114	74, 370	.....	19, 2
Eagle line.....	.....	.....	.....	.....	.....	.....
Total.....	206, 222	1, 513, 308	197, 120	1, 641, 797	2, 269, 612	4, 92, 72
Increase compared with last fis- cal year.....	22, 238	108, 892	44, 042	334, 720	222, 260	95, 67

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 41.—Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Denmark during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	Grams.	Rates.	Grams.	Grams.	Grams.
Hamburg-American Packet Co..	76, 807	647, 730	83, 172	762, 160	819, 046	62, 12
North German Lloyd, of Bremen	58, 178	509, 780	51, 903	475, 749	630, 588	32, 2
Eagle line.....	.....	.....	3, 647	33, 125	.....	12, 12
Baltic Lloyd.....	.....	.....	3	43	.....	.....
Total.....	134, 985	1, 157, 519	138, 725	1, 277, 077	1, 449, 634	1, 02, 26
Compared with last { Decrease..	104, 663	812, 047	.....	.....	.....	.....
fiscal year: { Increase..	.....	.....	20, 563	194, 324	173, 218	54, 2

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 42.—Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Sweden during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	Grams.	Rates.	Grams.	Grams.	Grams.
Hamburg-American Packet Com- pany, via Germany .....	97, 244	715, 668	154, 485	1, 452, 855	387, 955	967, 386
North German Lloyd, of Bremen, via Germany .....	62, 061	439, 420	33, 686	316, 190	183, 159	266, 149
North German Lloyd, of Bremen, via England .....	39, 709	330, 301	51, 849	492, 385	311, 785	474, 637
Eagle line, via Germany .....	2, 343	15, 725	7, 988	72, 559	10, 040	32, 480
Dale, or Inman line, via England	7, 268	35, 652	.....	.....	47, 520	.....
Cunard line, via England .....	5, 959	47, 085	.....	.....	33, 300	.....
White Star line, via England ..	.....	.....	4, 504	43, 050	.....	24, 630
Baltic Lloyd, direct service .....	.....	.....	.....	.....	.....	6, 251
Total .....	214, 604	1, 583, 849	252, 512	2, 377, 039	973, 759	1, 771, 531

Postal convention with Sweden went into effect July 1, 1873.

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 43.—Number and weight of letters, and weight of newspapers, &c., exchanged between the United States and Norway during the fiscal year ended June 30, 1874.

Lines.	Letters.				Newspapers, &c.	
	Received.		Sent.		Received.	Sent.
	Rates.	Grams.	Rates.	Grams.	Grams.	Grams.
Hamburg-American Packet Com- pany, via Germany .....	71, 328	570, 530	99, 152	934, 403	228, 545	860, 664
North German Lloyd, of Bremen, via England and Germany ....	64, 833	506, 075	59, 675	565, 419	194, 205	352, 197
Funch, Edye & Co.'s line, direct service .....	2, 613	10, 991	510	4, 599	46, 315	100, 014
Dale, or Inman line, via England	527	4, 240	.....	.....	2, 150	.....
Cunard line, via England .....	2, 692	20, 715	.....	.....	11, 700	.....
Eagle line, via Germany ..	.....	.....	3, 942	34, 415	.....	11, 873
White Star line, via England .....	.....	.....	4, 291	40, 430	.....	21, 840
Total .....	141, 993	1, 122, 551	167, 570	1, 579, 266	482, 915	1, 346, 586

Postal convention with Norway went into effect July 1, 1873.

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 44.—Statement of letters and newspapers, with the several postages, received in and sent from the United States to Panama and Colon during the fiscal year ended June 30, 1874.

Pacific Mail Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received .....	106, 701	61, 817	\$11, 426 67
Sent.....	106, 655	164, 205	15, 631 40
Total.....	207, 356	226, 022	27, 112 07
Add newspaper postages, at two cents each .....			4, 530 44
Total postages .....			31, 632 49
Compared with last fiscal year .....	20, 140	12, 574	2, 631 53
{ Decrease .....			
{ Increase .....			

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 45.—Statement of letters and newspapers, with the several postages, received in and sent from the United States to Mexico during the fiscal year ended June 30, 1874.

United States and Mexican Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received .....	19, 793	15, 133	\$591 07
Sent.....	32, 129	44, 469	3, 221 50
Total.....	51, 922	59, 602	3, 802 97
Add newspaper postages, at two cents each .....			1, 192 04
Total postages.....			5, 055 01
Increase compared with last fiscal year.....	8, 744	9, 693	915 30

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 46.—Statement of letters and newspapers, with the several postages, received in and sent from the United States to Brazil during the fiscal year ended June 30, 1874.

United States and Brazil Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received .....	41, 245	23, 667	\$5, 896 23
Sent.....	54, 786	58, 757	8, 722 63
Total.....	96, 031	82, 424	14, 606 56
Add newspaper postages, at two cents each .....			1, 642 40
Total postages.....			16, 317 34
Compared with last fiscal year .....	6, 575	6, 570	4, 000 30
{ Increase .....			
{ Decrease .....			

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 47.—Statement of letters and newspapers, with the several postages, received in and sent from the United States to Ecuador during the fiscal year ended June 30, 1874.

Pacific Mail Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received .....	2,470	588	\$494 00
Sent .....	3,744	6,731	748 80
Total .....	6,214	7,319	1,242 80
Add newspaper postages, at two cents each .....			146 38
Total postages .....			1,389 18
Increase compared with last fiscal year .....	461	342	111 24

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 48.—Statement of letters and newspapers, with the several postages, received in and sent from the United States to Venezuela during the fiscal year ended June 30, 1874.

Pim, Forwood & Co.'s line.	Letters.	Newspapers, &c.	Postage on letters.
Received .....	1,501	215	\$148 07
Sent .....	3,926	2,244	392 60
Total .....	5,427	2,459	540 67
Add newspaper postages, at two cents each .....			49 18
Total postages .....			589 85
Increase compared with last fiscal year .....	4,425	2,357	487 61

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 49.—Statement of letters and newspapers, with the several postages, received in and sent from the United States to New Granada during the fiscal year ended June 30, 1874.

Pim, Forwood & Co.'s line.	Letters.	Newspapers, &c.	Postage on letters.
Received .....	8,734	1,797	\$872 08
Sent .....	6,366	4,187	638 00
Total .....	15,100	5,984	1,510 08
Add newspaper postages, at two cents each .....			119 68
Total postages .....			1,630 36
Increase compared with last fiscal year .....	2,227	4,023	801 84

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 50.—Statement of letters and newspapers, with the several postages, received in and sent from the United States to the West India Islands during the fiscal year ended June 30, 1874.

West India mail-steamers.	Letters.	Newspapers, &c.	Postage on letters.
Received .....	516, 062	142, 929	\$30, 565 70
Sent .....	360, 379	185, 648	36, 472 50
Total .....	876, 441	328, 577	69, 041 00
Add newspaper postages, at two cents each .....			6, 571 50
Total postages .....			95, 615 50
Compared with last fiscal year .....	38, 235	9, 873	1, 356 90
	{ Increase ...		
	{ Decrease ...		

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 51.—Statement of letters and newspapers, with the several postages, received in and sent from the United States to Japan and China during the fiscal year ended June 30, 1874.

Pacific Mail Steamship Company's steamers.	Letters.	Newspapers, &c.	Postage on letters.
Received .....	125, 113	143, 760	\$15, 040 30
Sent .....	99, 241	170, 003	9, 829 00
Total .....	224, 354	313, 763	24, 930 30
Add newspaper postages, at two cents each .....			6, 275 50
Total postages .....			31, 205 80
Increase compared with last fiscal year .....	7, 829	41, 347	2, 535 50

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 52.—Statement of letters and newspapers, with the several postages, received in and sent from the United States to Honolulu, Auckland, Melbourne, Sydney, &c., during the fiscal year ended June 30, 1874.

California, Oregon, and Mexico Steamship Company.	Letters.	Newspapers, &c.	Postage on letters.
Received .....	37, 319	27, 794	\$47 70
Sent .....	34, 901	72, 728	3, 597 60
Total .....	72, 220	100, 522	4, 065 30
Add newspaper postages, at two cents each .....			2, 010 40
Total postages .....			6, 075 70
Decrease compared with last fiscal year .....	13, 489	43, 592	3, 286 90

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 53.—*Statement of the amount of letter-postages on the mails exchanged between the United States and Nova Scotia, Newfoundland, and Bermuda, by mail-steamers, with partial report of the number of letters and newspapers, during the fiscal year ended June 30, 1874.*

	Unpaid.	Unpaid distributed.	Paid distributed.	Number of letters.*	Number of newspapers, &c.*
Received .....	\$877 80	\$853 72	\$11 41	\$14, 705	2, 888
Sent.....			3, 927 52	7, 823	8, 482

\* Reported by the New York office only.

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 54.—*Amount of postages on mails exchanged between the United States and the British provinces during the fiscal year ended June 30, 1874.*

Amount on unpaid received .....	\$17, 012 11	
Amount on paid received .....	193, 430 86	
		\$210, 442 97
Amount on unpaid sent .....	22, 808 69	
Amount on paid sent .....	210, 083 53	
		232, 892 22
Total .....		443, 335 19
Amount collected in the United States .....	227, 095 64	
Amount collected in the British provinces .....	216, 239 55	
Excess collected in the United States .....	10, 856 09	
Increase compared with last fiscal year .....	15, 878 89	
Number of letters sent .....	3, 625, 183	
Number of letters received .....	3, 409, 207	
Number of newspapers sent .....	1, 131, 443	
Number of newspapers received .....	612, 833	

NOTE.—Several of the larger offices have failed to report the number of newspapers exchanged.

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
October 10, 1874.

No. 55.—*Number of letters exchanged between the United States and foreign countries during the fiscal year ended June 30, 1874.*

Countries.	Number of letters.	
	Received.	Sent.
United Kingdom of Great Britain and Ireland.....	5,765,732	6,303,834
Germany .....	2,476,217	3,049,431
France.....	96,587	63,734
Belgium .....	84,322	77,197
Netherlands.....	97,095	114,775
Switzerland.....	192,449	191,941
Italy .....	206,222	197,137
Denmark .....	134,985	138,725
Sweden.....	214,604	252,512
Norway.....	141,993	167,570
Panama .....	106,701	100,655
Mexico .....	19,793	32,121
Brazil .....	41,245	54,775
Ecuador .....	2,470	3,744
Venezuela.....	1,501	3,999
New Granada .....	8,734	6,335
West Indies, &c.....	516,062	360,375
China and Japan.....	125,113	99,241
Honolulu, &c .....	37,319	34,911
Nova Scotia and Bermuda* .....	14,705	7,823
Canadian provinces .....	3,409,207	3,625,150
Total .....	13,693,056	14,885,949
Increase compared with last fiscal year.....	566,545	553,317

\* Partial returns only.

J. J. MARTIN,  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 56.—*Amounts reported as due the steamers of the Dale or Inman line for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended March 31, 1874.....	\$23 75
Quarter ended June 30, 1874 .....	1,534 75
Total amount paid .....	1,558 50

*Amounts reported as due the steamers of the North German Lloyd, of Bremen, for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873.....	\$9,682 50
Quarter ended December 31, 1873.....	11,134 50
Quarter ended March 31, 1874.....	10,586 50
Quarter ended June 30, 1874 .....	10,095 50
Total amount paid .....	41,499 00

*Amounts reported as due the steamers of the Canadian line for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873.....	\$1,671 00
Quarter ended December 31, 1873.....	1,764 00
Quarter ended March 31, 1874.....	1,771 00
Quarter ended June 30, 1874 .....	1,565 00
Total amount paid .....	6,771 00



*Amounts reported as due the steamers of the Hamburg-American Packet Company for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873 .....	\$13,018 82
Quarter ended December 31, 1873 .....	13 093 75
Quarter ended March 31, 1874 .....	13,466 70
Quarter ended June 30, 1874 .....	11,132 09
Total amount paid .....	50,711 36

*Amounts reported as due the steamers of the Cunard line for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873 .....	\$1,761 91
Quarter ended December 31, 1873 .....	1,409 13
Quarter ended March 31, 1874 .....	13,098 59
Quarter ended June 30, 1874 .....	12,290 09
Total amount paid .....	28,559 72

*Amounts reported as due the steamers of the Liverpool and Great Western Steam Company for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873 .....	\$17,236 33
Quarter ended December 31, 1873 .....	19,688 95
Quarter ended March 31, 1874 .....	7,930 77
Quarter ended June 30, 1874 .....	7,088 31
Total amount paid .....	51,944 36

*Amounts reported as due the steamers of the White Star line for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873 .....	\$11,997 54
Quarter ended December 31, 1873 .....	10,288 14
Quarter ended March 31, 1874 .....	9,919 48
Quarter ended June 30, 1874 .....	8,217 16
Total amount paid .....	40,422 32

*Amounts reported as due the steamers of the Eagle line for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended December 31, 1873 .....	\$391 48
Quarter ended March 31, 1874 .....	1,754 53
Quarter ended June 30, 1874 .....	1,722 21
Total amount paid .....	3,868 22

*Amounts reported as due the steamers of the Red Star line for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873 .....	\$3 47
Quarter ended December 31, 1873 .....	1 22
Quarter ended March 31, 1874 .....	2 26
Quarter ended June 30, 1874 .....	5 79
Total amount paid .....	17 74

*Amounts reported as due the steamers of Messrs. Funch, Edye & Co.'s line for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873 .....	\$4 80
Quarter ended June 30, 1874 .....	8 21
Total amount paid .....	13 01

*Amounts reported as due the steamers of the American Steamship Company for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended March 31, 1874 .....	\$253 60
Quarter ended June 30, 1874 .....	447 57
Total amount paid .....	701 17

*Amounts reported as due the steamers of the Pacific Mail Steamship Company for the conveyance of mails between the United States and Panama during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873 .....	\$5,893 55
Quarter ended December 31, 1873 .....	7,321 10
Quarter ended March 31, 1874 .....	6,317 38
Quarter ended June 30, 1874 .....	6,824 17
Total amount paid .....	26,356 50

*Amounts reported as due the steamers conveying the mails between the United States and the West India Islands, Mexico, Brazil, Bermuda, New Granada, and New Zealand for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873 .....	\$19,195 18
Quarter ended December 31, 1873 .....	15,351 13
Quarter ended March 31, 1874 .....	17,638 03
Quarter ended June 30, 1874 .....	16,670 68
Total amount paid .....	68,855 02

*Amounts reported as due the steamers conveying the mails between the United States and Nova Scotia for services rendered during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873 .....	\$558 40
Quarter ended December 31, 1873 .....	440 24
Quarter ended March 31, 1874 .....	139 57
Quarter ended June 30, 1874 .....	621 38
Total amount paid .....	1,759 59

The following reports for the transportation of closed mails, for the periods named, have been made during the fiscal year ended June 30, 1874:

To the steamers of the Liverpool and Great Western Steam Company:

For quarter ended December 31, 1872 .....	\$2,296 27
For quarter ended March 31, 1873 .....	1,411 37
For quarter ended June 30, 1873 .....	2,274 77
For quarter ended September 30, 1873 .....	350 11
Total .....	6,332 47

To the steamers of the Cunard line:

For quarter ended December 31, 1872 .....	\$24 34
For quarter ended March 31, 1873 .....	6 29
For quarter ended June 30, 1873 .....	23 15
For quarter ended September 30, 1873 .....	597 77
Total .....	627 55

To the steamers of the White Star line:

For quarter ended December 31, 1872 .....	\$109 76
For quarter ended March 31, 1873 .....	53 72
For quarter ended June 30, 1873 .....	46 98
For quarter ended September 30, 1873 .....	77 45
Total .....	287 91

## To the steamers of the Hamburg-American Packet Company :

For quarter ended December 31, 1872.....	\$96 23
For quarter ended March 31, 1873.....	939 63
For quarter ended June 30, 1873.....	293 59
For quarter ended September 30, 1873.....	186 24

Total ..... 1,515 69

## To the steamers of the North German Lloyd, of Bremen :

For quarter ended March 31, 1873.....	\$8 75
For quarter ended June 30, 1873.....	3 73
For quarter ended September 30, 1873.....	14 45

Total..... 26 93

J. J. MARTIN, Auditor. .

## OFFICE OF THE AUDITOR OF THE TREASURY

FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

No. 57.—*Balances due the United States on the adjustment of the postal accounts between the United States and Switzerland, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873.....	\$3,757 97
Quarter ended December 31, 1873.....	2,165 59
Quarter ended March 31, 1874.....	2,177 94
Quarter ended June 30, 1874.....	2,059 52

Total..... 10,161 02

*Balances due the United States on the adjustment of the postal accounts between the United States and the Netherlands, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873.....	\$1,108 49
Quarter ended December 31, 1873.....	1,200 18
Quarter ended March 31, 1874.....	1,162 47
Quarter ended June 30, 1874.....	1,134 45

Total..... 4,605 59

*Balances due the United States on the adjustment of the postal accounts between the United States and Italy, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873.....	\$619 30
Quarter ended December 31, 1873.....	1,136 66
Quarter ended March 31, 1874.....	1,607 93

Total..... 3,363 89

*Balances due on the adjustment of the extranational postal accounts between the United States and Denmark, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.*

Quarter ended June 30, 1873, balance due Denmark.....	\$938 06
Quarter ended September 30, 1873, balance due the United States..	\$75 02
Quarter ended December 31, 1873, balance due the United States...	15 58
Quarter ended March 31, 1874, balance due Denmark.....	744 18

Total balances due Denmark.....1,682 24

Total balances due the United States..... 90 60

*Balances due from the United States to the Kingdom of Belgium, on the adjustment of the postal accounts between the United States and Belgium, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.*

Quarter ended June 30, 1873.....	\$1,978 16
Quarter ended September 30, 1873.....	1,971 40
Quarter ended December 31, 1873.....	2,194 62
Quarter ended March 31, 1874.....	2,425 95

Total..... 8,570 13

*Balances due from the United States to the Empire of Germany, on the adjustment of the postal accounts between the United States and Germany, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.*

Quarter ended June 30, 1873.....	\$27,973 33
Quarter ended September 30, 1873.....	18,480 94
Quarter ended December 31, 1873.....	16,148 74
Quarter ended March 31, 1874.....	19,455 14
Total.....	82,134 33

*Balances due from the United States to the United Kingdom of Great Britain and Ireland, on the adjustment of the postal accounts between the United States and the United Kingdom, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.*

Quarter ended December 31, 1872.....	\$15,179 33
Quarter ended March 31, 1873.....	20,443 94
Quarter ended June 30, 1873.....	24,652 74
Quarter ended December 31, 1873.....	23,297 14
Total.....	83,573 33

*Balances due from the United States to the Kingdom of Sweden, on the adjustment of the postal accounts between the United States and Sweden, for the quarters indicated, settlements made during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873.....	\$3,996 72
Quarter ended December 31, 1873.....	4,365 94
Quarter ended March 31, 1874.....	5,254 94
Total .....	13,616 33

*Balance due from the United States to the Kingdom of Norway on the adjustment of the postal account between the United States and Norway, for the quarter ended September 30, 1873, settlement made during the fiscal year ended June 30, 1874.*

Quarter ended September 30, 1873.....	\$51 33
---------------------------------------	---------

J. J. MARTIN.  
Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 10, 1874.

43D CONGRESS, }  
2d Session. }

HOUSE OF REPRESENTATIVES.

{ Ex. Doc.  
No. 7.

---

ANNUAL REPORT

OF

THE ATTORNEY-GENERAL

FOR THE

FISCAL YEAR ENDING JUNE 30, 1874.



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1874.



•

LETTER

FROM

THE ATTORNEY - GENERAL,

TRANSMITTING

*His annual report for the fiscal year ending June 30, 1874.*

•

---

DECEMBER 8, 1874.—Referred to the Committee on the Judiciary and ordered to be printed.

---

DEPARTMENT OF JUSTICE,  
*Washington, December 7, 1874.*

SIR: I have the honor to transmit herewith my annual report for the fiscal year ending June 30, 1874.

Very respectfully, your obedient servant,

GEO. H. WILLIAMS,  
*Attorney-General.*

Hon. JAMES G. BLAINE,  
*Speaker of the House of Representatives.*





# REPORT.

---

DEPARTMENT OF JUSTICE,  
*Washington, December 7, 1874.*

*to the Senate and House of Representatives of the United States of America  
in Congress assembled :*

By the first section of the act of Congress entitled "An act to amend an act entitled 'An act to establish the Department of Justice, and for other purposes,' " approved March 3, 1873, it becomes the duty of the Attorney-General to submit at the commencement of each regular session of Congress a report of the business of said Department for the preceding fiscal year; and also a report of such other matters as he may deem proper, including a statement of the several appropriations placed under the control of the Department, stating the amount appropriated, and a detailed statement of the amounts used for defraying the expenses of the United States courts in each judicial district; also, the statistics of crime under the laws of the United States, and a statement of the number of cases, civil and criminal, pending during the preceding year in each of the several courts of the United States.

Pursuant to these requirements of law, I have the honor to respectfully submit the following report of the operations of this Department for the fiscal year ending June 30, 1874.

## CIVIL AND CRIMINAL SUITS.

Exhibits marked A, B, and C, show the amount of business transacted in the courts of the United States in the several judicial districts.

Exhibit A is a statement of the number of civil suits to which the United States was a party, pending in the circuit and district courts of the United States on the 1st day of July, 1874, with the number of such suits terminated in said courts during the fiscal year ending June 30, 1874.

Civil suits, to which the United States was a party, were pending July 1, 1874, as follows: Customs suits, 3,772; internal-revenue suits, 2,014; post-office suits, 135; miscellaneous suits, 933; making, in the aggregate, 6,854 civil suits pending on that day.

During the fiscal year ending June 30, 1874, there were terminated 10,558 civil suits; 1,133 of these were customs suits, 16 of which were appealed from the district to the circuit court, and 12 from the circuit to the Supreme Court; 978 were internal-revenue suits, 7 of which were appealed from the district to the circuit court, and 10 from the circuit to the Supreme Court; 109 were post-office suits, of which 1 was appealed from the circuit to the Supreme Court; 838 were miscellaneous suits, 7 of which were appealed from the district to the circuit court, and 11 from the circuit to the Supreme Court.

The aggregate amount of judgments in favor of the United States in these suits was \$2,021,724.31, and the amount actually realized on these judgments during the last fiscal year was \$867,192.18.

Exhibit B is a statement of the number of criminal cases pending in the United States courts July 1, 1874, with the number of such cases terminated in said courts during the last fiscal year.

There were pending on the 1st day of July, 1874, in the circuit and district courts of the United States 6,627 criminal prosecutions; 125 of these were for violations of the customs laws, 4,734 for violations of internal-revenue laws, 219 for violations of the post-office laws, 306 prosecutions under the enforcement acts, 13 under the naturalization laws, 93 for embezzlement, and 1,077 miscellaneous prosecutions.

Six thousand and eighteen criminal cases were terminated during the fiscal year ending the 30th of June last. Two hundred and two of these were prosecutions under the customs laws, in which there were 147 convictions, 8 acquittals, and 47 discontinuances; 3,291 under the internal-revenue laws, in which there were 1,641 convictions, 392 acquittals, and 1,258 discontinuances; 251 under the post-office laws, in which there were 168 convictions, 25 acquittals, and 58 discontinuances; 966 under the enforcement acts, in which there were 102 convictions, 92 acquittals, and 772 discontinuances; 1 under the naturalization laws, in which there was a conviction; 37 for embezzlement, in which there were 11 convictions, 4 acquittals, and 22 discontinuances; 1,270 were miscellaneous prosecutions, in which there were 553 convictions, 224 acquittals, and 493 discontinuances.

Exhibit C is a statement of the number of civil suits, to which the United States was not a party, commenced, and also those terminated in the circuit and district courts of the United States during the fiscal year ending June 30, 1874.

It appears from this exhibit that a total of 19,194 suits of this kind were commenced during the year, of which 2,362 were cases in admiralty, 7,231 in bankruptcy, and 9,601 other suits of a miscellaneous character.

One thousand five hundred and fifty-two cases in admiralty, 3,703 in bankruptcy, and 6,235 miscellaneous cases, making a total of 11,490 cases of this kind, were terminated during the last fiscal year.

Judgments for plaintiffs in these cases were as follows: 1,115 judgments in admiralty suits, amounting to \$962,074.40; 494 in bankruptcy suits, \$30,203.55; 3,346 in other suits, \$9,516,347.88; making a total of \$10,508,625.83. Judgments for defendants were, 285 in admiralty, \$29,215.01; 341 in bankruptcy, \$24.30; 1,921 in other suits, \$33,516.78, making a total of \$62,756.09.

In 3,988 cases in which the United States was not a party, reported terminated, the result is not stated, while from some of the districts reports of this character of cases have been received, and therefore the aggregate of cases and judgments included in this statement is much less than it would have been if full reports from all the districts had been obtained.

United States attorneys were called upon for this information, but the clerks, upon whom they relied for it, in some instances failed to furnish it, and I have no means of compelling clerks of the courts to make reports to United States attorneys or to this Department in such matters.

#### COURT EXPENSES.

Exhibit D shows the amount of funds advanced to the marshals of the United States for the several judicial districts during the fiscal year ending June 30, 1874, to defray the expenses of the courts of the United States, including fees of marshals, jurors, attorneys, clerks of the courts.

United States commissioners, special counsel, the expenses of maintaining prisoners, the expenses of the United States jail in this District, and for rent, furnishing court-rooms, and other miscellaneous expenses properly chargeable to this appropriation.

By this statement it appears that the amount advanced to marshals for court expenses, including their own fees and fees to jurors and witnesses, was \$2,071,332.18; to the United States attorneys, their assistants, and substitutes, \$275,476.90; to the clerks of the courts of the United States, \$89,063.85; to United States commissioners, \$75,830.10; for rent of court-rooms, \$86,335.58; expenses of the United States jail in this District, \$43,762.01; miscellaneous expenses, \$27,930.19; the total expenditures, as shown in Exhibit D, \$2,669,730.81, being \$361,138.04 less in the aggregate than the expenditures for these purposes during the fiscal year ending June 30, 1873. There was \$401,335.95 less advanced to the marshals for defraying the expenses of the courts, their own fees, and fees to jurors and witnesses, than for the fiscal year ending June 30, 1873.

It has been my constant aim to keep the expenses of the courts within the limits of the amount provided for that purpose by Congress, and during the last fiscal year I have, both by correspondence and personal interviews with the marshals and other officers of the courts, endeavored to impress upon them the necessity for the most rigid economy in the disbursement of the public funds, and have asked of them an earnest co-operation with the Department in the interests of economy; and it is gratifying for me to be able to present to Congress a statement so creditable to the officers throughout the country who by their exertions contributed so largely to this result.

There was on the 1st day of July last to the credit of the appropriation for the previous fiscal year \$330,269.19. This balance is available for expenses incurred and services rendered during the fiscal year for which accounts had not been rendered until after the close of the year. Accounts have been presented since the first of July last amounting to \$253,916.88, which were paid out of the balance, leaving on the day of the date of this report the sum of \$76,352.31. The sum remaining, I think, will be sufficient to liquidate all claims that may hereafter be presented and which are properly chargeable to this appropriation.

#### SUPREME COURT.

Number of cases argued at October term, 1873, of the Supreme Court, in which the Government was interested.....	55
Of these there were decided in favor of the Government.....	32
Of these there were decided against the Government.....	19
Of these the court was equally divided in.....	1
Of these there remained undecided at the end of term.....	3
Cases dismissed in which Government was appellant or plaintiff in error .....	1
Cases dismissed in which Government was appellee or defendant in error .....	1
Cases reversed by consent in which Government was appellee or defendant in error, the point in them having been decided by previous cases .....	2

Twelve of the above cases were suits decided against the United States to establish title to land in Louisiana under the act of June 22, 1860, 12 Stat. at L., 85,) which required appeals to the Supreme Court by the

United States in all cases where the judgment below was in favor of the petitioner, and said appeals were taken only in consequence of this requirement.

#### THE COURT OF CLAIMS.

The following is a summary of the business before the Court of Claims during the last year :

Miscellaneous cases disposed of during the year.....	731
Cotton cases disposed of during the year.....	44
Total.....	<u>775</u>
Amount claimed in miscellaneous cases decided.....	\$1,132,151 00
Amount claimed in cotton cases decided.....	2,922,208 97
Total amount claimed.....	<u>4,054,359 97</u>
Amount awarded in miscellaneous cases.....	\$652,442 77
Amount awarded in cotton cases.....	1,766,361 98
Total amount awarded.....	<u>2,418,804 75</u>
Miscellaneous cases decided in favor of claimants.....	699
Miscellaneous cases decided in favor of defendants.....	32
Number of cases appealed to Supreme Court of the United States by claimants..	14
Number of cases appealed to Supreme Court of the United States by defendants..	10
Total appealed.....	<u>24</u>
Cotton cases decided in favor of claimants.....	41
Cotton cases decided in favor of defendants.....	3
Number of cases pending at the beginning of the year.....	4,402
Number of cases brought during the year.....	1,985
Total.....	<u>6,387</u>
Disposed of during the year.....	775
Still pending.....	<u>6,612</u>

Of the 1,985 suits brought during the year, 1,114 are suits by employes of the Government to recover the difference in their daily wages between eight hours' and ten hours' labor. Two hundred and twenty-four of the cases brought during the year are claims by postmasters and ex-postmasters for additional compensation under the provisions of the acts of July 1, 1864, (13 Stats. at L., 335,) and June 8, 1872, (17 Stats. at L., 283.) Forty of these cases are suits for the refunding of money collected by the Internal-Revenue Department. Four hundred and eighty-nine are cotton cases. Forty-two are miscellaneous. In 66 of the cases no printed petition has yet been received, and the nature of the claim is not known. Many of these cases may be grouped in classes, and the decision of one of each class in which the facts are similar, and the principles of law are identical, will determine all the others involving the same principles of law and the same state of facts.

There should be some legislation modifying the twelfth section of the act of March, 1863, relating to the affidavit to be filed in support of the petition of claimant. As the law now stands, verification by the affi-

vit of the claimant, or his agent or attorney, that he believes the facts stated in the petition to be true is sufficient. Many petitions are filed verified by the affidavits of claim-agents or other persons who cannot possibly have any knowledge beyond hearsay of the facts which they swear they believe to be true.

It is certainly not asking too much of any person who has a claim against the Government that he should state it distinctly and swear to it with certainty; or, if it is impossible for the claimant to make the verification, then the agent should state that the allegations in the petition are true of his own knowledge, except such matters or acts as are therein stated to be upon information and belief, and as to such matters he believes the statements to be true.

Neither the commissioners of the Court of Claims, nor the court itself, can now enforce the attendance of witnesses for examination. Much testimony is lost to the Government by this want of power. The United States district courts should have authority to issue subpoenas directing attendance before commissioners of the Court of Claims, and be given power to punish as for contempt any failure to obey the command.

Many of the rebel records and archives are now in the possession of the Government, and would furnish much valuable evidence to defeat excessive and unjust claims, if they could be used. The heads of Departments having their custody should have authority to properly certify them as the records of other Departments are now certified, and they should be competent evidence, their credibility and conclusiveness to be determined by the judges from all the facts and proofs in the case.

#### APPROPRIATIONS.

The following statement shows the expenditures made during the fiscal year ending June 30, 1874, from the various appropriations made by Congress and placed under the control of this Department. It will be seen that all the appropriations have been sufficient for the purposes for which they were made, and in some instances unexpended balances remain to their credit.

*Exhibit showing the expenditures made during the fiscal year ending June 30, 1874, from the various appropriations made by Congress and placed under the control of this Department.*

##### Expenses of United States courts:

Appropriation.....	\$3,000,000 00
Amount expended.....	2,669,730 81
Balance.....	330,269 19

##### Salaries in the Department:

Appropriation.....	\$112,320 00
Appropriation, act June 22, 1874.....	417 00
Amount expended.....	112,737 00
Balance.....	110,989 87
Balance.....	1,747 13

##### Contingent expenses:

Amount appropriated.....	\$21,000 00
Amount expended.....	21,000 00

Postage:	
Appropriation.....	\$15,000 00
Amount expended.....	5,890 00
Balance.....	9,110 00
Salary of the warden of the jail in the District of Columbia:	
Appropriation.....	\$2,000 00
Amount expended.....	2,000 00
Support of convicts transferred from the District of Columbia:	
Appropriation.....	\$10,000 00
Amount expended.....	6,177 25
Balance.....	3,822 75
Prosecution of crimes:	
Appropriation.....	\$50,000 00
Amount expended.....	43,024 50
Balance.....	6,975 50
Defending claims under convention with Mexico:	
Appropriation.....	\$10,000 00
Amount expended.....	1,100 00
Balance.....	8,900 00
Prosecution and collection of claims due the United States:	
Appropriation.....	\$15,000 00
Amount expended.....	2,490 97
Balance.....	12,509 03
Defending claims for seizure of captured and abandoned property:	
Appropriation.....	\$30,000 00
Amount expended.....	30,000 00
Punishing violations of intercourse acts and frauds:	
Appropriation.....	\$10,000 00
Amount expended.....	6,897 75
Balance.....	3,102 25
Repairs to City Hall, Washington, D. C.:	
Appropriation.....	\$2,500 00
Amount expended.....	2,500 00
Salaries and expenses of commissioners to codify the laws:	
Appropriation.....	\$12,000 00
Appropriation act June 22, 1874.....	3,175 03
Amount expended.....	15,175 03
Balance.....	12,000 00
Salaries and expenses of metropolitan police:	
Appropriation.....	\$207,530 00
Amount expended.....	204,500 00
Balance.....	3,030 00
Rent of building:	
Appropriation.....	\$17,000 00
Amount expended.....	16,929 99
Balance.....	70 01



<b>Current expenses of the Reform-School of the District of Columbia :</b>	
Appropriation.....	\$9,040 00
Amount expended.....	7,646 79
Balance.....	<u>1,393 21</u>
<b>Purchase of Supreme Court Reports:</b>	
Appropriation.....	\$12,500 00
Amount expended.....	12,500 00
Balance.....	<u><u>1,008 86</u></u>
<b>Payment of expenses and emoluments for United States marshal of Utah :</b>	
Appropriation.....	\$20,000 00
Amount expended.....	18,991 14
Balance.....	<u><u>1,008 86</u></u>

## DISTRIBUTION OF DOCUMENTS.

This Department is charged by law with the distribution of the Statutes at Large and Supreme Court Reports to the officers of the courts of the United States, and the Secretary of State and the Secretary of the Interior are required to furnish these books to this Department, from time to time, as they may be published.

In compliance with law, the Secretary of the Interior has furnished 408 copies of volumes 13, 14, 15, 16, 17, and 18 of Wallace's Supreme Court Reports. Of these there have been distributed to the officers of the courts 367 copies.

The Secretary of State has furnished 425 copies of the Pamphlet Laws of the first session of the Forty-third Congress, of which there have been distributed to the officers of the courts 369 copies.

## UNITED STATES JAIL.

In accordance with the provisions of the act of March 5, 1872, the warden of the United States jail in this District has submitted his report for the year ending the 31st day of October, 1874. The report gives a synopsis of the expenses of the jail during the year, the daily average of the number of prisoners, the offenses for which they were committed, and their disposition.

The total number of prisoners during the year was 1,810. At the beginning of the year there were 104 males and 14 females in the jail. The daily average was 161, being an increase of the average over last year of 31. Of the number committed during the year 1,639 were males and 171 females. There were released during the year 1,496 males and 168 females, leaving in the jail at the close of the year 158 prisoners. There were sent to the penitentiary at Albany 48 males and 2 females; to the Reform-School of this District, 42. One was executed, one died, and twelve were pardoned by the President. Six hundred and sixty-two were committed on the charge of petit larceny and 521 on the charge of assault and battery, seven for murder, and the others for various causes, as stated by the warden. A statement of those tried, convicted, and sentenced is submitted by the warden.

The expenses during the year were: For supplies, salaries of physician, guards, and employés, \$23,580.57; subsistence of prisoners, \$11,814.53; beds, bedding, and clothing, \$874.87; fuel, lights, gas-fitting, sewerage, &c., \$2,541.84; furniture, stoves, and other miscellaneous items, \$725.19; repairs, and expenses of execution, \$511.77; medicines, lime, and other disinfectants, ice, and miscellaneous articles, \$1,376.02; trans-

portation of convicts to Albany, \$1,501.54; the aggregate expenses for the year amounting to \$44,854.33, being an increase over the expenditures for these purposes during the previous year of \$3,791.31. This increased expense arises from several causes: first, from the increased number of prisoners. During the previous year there were committed to the jail 1,577, being 233 less than for the current year. It was also necessary to increase the number of guards, which was necessitated by the crowded condition of the jail and its great insecurity.

No escapes have occurred during the year, nor since the present warden has had charge. As has been customary since the jail was placed under the direction and control of this Department, I have directed an officer to occasionally visit it and make a thorough inspection of the food and clothing provided for the prisoners. The food, I am informed, is wholesome and abundant, and clothing is issued to those in actual need of it. Owing to the strict sanitary precautions used, no sickness of any consequence has occurred during the year, indicating vigilance and care on the part of the officers and employés.

In my last annual report I had the honor to invite the attention of Congress to the propriety of making some provision for the employment of those sentenced to imprisonment in the jail, and I again respectfully invite the attention of Congress to this object, and particularly to what is said in relation thereto by the warden in his report.

#### METROPOLITAN POLICE.

Pursuant to the act of Congress of March 3, 1873, the board of metropolitan police have submitted their annual report to this Department for the year ending the 30th of September, 1874.

It will be perceived from an examination of the report that the regular force is made up as follows: 1 major and superintendent, 1 captain and inspector, 10 lieutenants, 20 sergeants, 200 privates or patrolmen, 6 detectives.

Pursuant to law, there are also in the employment of the board the following officers: 1 secretary of the board, 1 property clerk, 3 clerks, 3 surgeons, 1 major, and 9 laborers. There are also under commission 73 persons as additional privates to do duty in various localities at the expense of the parties making the application for their appointment: making an aggregate of 256. There are detailed for duty at the central office or headquarters, 1 major and superintendent, 1 captain and inspector, 1 lieutenant, (as hack-inspector,) 6 detectives, 1 lieutenant, and 4 privates as sanitary officers.

The District of Columbia is divided into eight precincts, to each of which are assigned 1 lieutenant, from 2 to 3 sergeants, and from 20 to 30 privates. Twenty-six members are detailed to special duty, as follows: 3 at the Executive Mansion, 2 at the police court, 2 at the railroad depots, 3 at police headquarters, as telegraph operators, &c., and 16 at the various station-houses. In the enforcement of discipline and efficiency, charges have been prepared and trials accorded in 94 cases, resulting as follows: 7 dismissals; 1 dropped from the rolls; 1 reduced to the ranks; 20 reprimanded; 8 fined; 10 cautioned, but complaint dismissed; 47 complaints dismissed. A very satisfactory state of efficiency is reported by the board during the year. There has been expended in the maintenance of the force during the fiscal year ending June 30 last the sum of \$204,976.62, as appears from the statement of the disbursing officer of this Department who disbursed that appropria-

tion during said fiscal year, which is appended to the report of the board.

I invite attention to the operations of the detective corps attached to this force. These officers have an arduous, responsible, and, in many cases, a delicate duty to perform. The board report that they have performed their duties in a satisfactory manner. Much valuable property has been recovered and restored to the owners. Considerable success has been met with in their endeavors to ferret out criminals and in furnishing evidence for their conviction and punishment. The following is a synopsis of the work performed by them during the year, as far as it could be made a matter of record. A large part of the service of these officers is necessarily of such a character that a report of them cannot be made. The number of robberies reported is 895; arrests made, 512; amount of property reported lost or stolen, \$29,411.49; the amount of property recovered, \$35,945.89; the amount of property turned over to the property-clerk, \$10,165; the amount of property turned over to owners, \$25,789.89; the amount of property taken from persons and returned to the same, \$2,867.02. The amount of property recovered being greater than that reported lost or stolen is accounted for from the fact that frequently property is recovered before it is reported lost or stolen.

The board has renewed the lines of telegraph throughout the entire District, which was rendered necessary on account of the old line, which has been in use nearly twelve years, becoming corroded and unreliable. These wires now extend to Tenallytown, Brightwood, the Reform-School, and Benning's Station, across the Eastern Branch of the Potomac, covering all the important objective points within the District. The wires were formerly attached to chimneys and roofs of houses, but are now placed upon poles erected for the purpose. This telegraph is a great auxiliary to the force in sending and receiving information. I respectfully invite attention to the statement of the work performed by it, attached to the report of the board.

Under the provisions of the third section of the act of Congress approved July 23, 1866, the board has received and considered 419 applications for the approval of licenses for the retail sale of liquors, and disposed of them by approving of 320, disapproving 99. The number of applications for this purpose is one more than last year; the number approved is 51 less than last year; the number disapproved is 52 more than last year, and the number of transfers approved is 22 less than last year.

I invited attention in my last annual report to the suggestions of the board in regard to the sale of liquor in the District, and to the necessity for more stringent and effective laws for the punishment of persons engaged in this traffic without the proper license. I again respectfully invite attention to the remarks of the board upon this subject contained in their present report. I think it necessary that some additional legislation should be had which will more effectually break up this illicit traffic.

I also invite attention to the report of the property-clerk, which accompanies the report of the board, and to the suggestions as to the legal disposition of property waifs. It appears from the report of the property-clerk that there were received at his office during the year property valued at \$19,827.69, and there was delivered to claimants, on order of court and other evidence of ownership, property amounting to \$17,393.33. The entire property operations of the police force, other than that which came through the office of the property-clerk, amount to the sum of \$132,201.33, making an aggregate of

\$152,028.92, of which property to the value of \$149,594.56 was restored to claimants, leaving property to the value of \$2,434.36 undisposed of.

The board of health having, under the authority of Congress, special charge of the sanitary condition of the District, comparatively little has been done in that line by the police force; only one private has been engaged in this kind of duty.

The whole number of arrests made during the year by the force has been 13,192, of which 11,122 were males, 2,070 were females; 4,832 were married, and 8,360 were single; 8,361 could read and write, and 4,831 could not read and write. There were 7,592 males and 1,557 females charged with offenses against persons, and 3,530 males and 513 females charged with offenses against property. Of the cases reported, 4,945 were dismissed, 17 turned over to the military, 1,298 sent to jail for court, 127 gave bail for court, 1,470 were sent to the work-house, 261 gave securities to keep the peace, 50 were sent to the Reform-School, 85 not disposed of, and in 1,310 cases various light punishments have been inflicted. Fines have been imposed in 3,629 cases, amounting in the aggregate to \$37,248.25, as follows: in District of Columbia cases, \$14,816.50; in United States cases, \$7,145.75. District of Columbia cases amounting to \$11,126 were appealed from; United States cases amounting to \$4,160 were appealed from.

For further and more detailed reports of the working of the force generally, I respectfully refer to the various tables and other statements accompanying the report.

I desire to invite particular attention to the necessity for the increase of this force. Owing to the increase in the population, the force as now organized is entirely inadequate. After deducting the various details from the 200 privates, the number now allowed by law, there are remaining but 174 for regular patrol duty. According to the population of the District, as shown by the census of 1870, there is an average of one policeman to each 750 inhabitants, which, on account of the width of the streets, and many sparsely settled sections of the District, is wholly inadequate. The population of the District has very much increased since 1870, and it is estimated that now there is actually but one private for from 900 to 1,000 inhabitants. The board recommends that the patrol force be increased to at least 400 men; and I invite attention to their arguments and statements in support of their recommendations. Whilst not recommending any particular number, I think the force should be materially increased.

In my last annual report I invited the attention of Congress to the unhealthy, insecure, and disgraceful condition of the station-houses provided by the District authorities. Two of them, it appears from the report of the board, have been condemned by the board of health as nuisances, and dangerous to life and health. Some of them are so illy adapted to the purposes for which they were erected that the board has been compelled to dispense with the reserve force for the precinct in which they are located, because the health of the men stationed there became seriously impaired. The efficiency and discipline of the force has been greatly damaged by the want of proper station-houses and accommodations; and those who are unfortunate enough to be obliged to seek a night's lodging at such places, as well as those who may be arrested, are in danger by being confined in the filthy places attached to most of the stations.

I would respectfully recommend that Congress make a suitable appropriation for the cleaning and repair of the present station-houses, and for the erection of such others as may be necessary.



## REFORM-SCHOOL.

I have the honor to submit herewith the reports of the president, superintendent, and physician of the Reform-School of the District of Columbia. It appears from the report of the superintendent that there were remaining in the institution on the 1st day of November, 1873, 113 boys. There have been received during the year 67 boys. The whole number in the institution during the year was 180. Twenty-seven were discharged, 2 escaped, and 151 were remaining on the 1st ultimo. The ages of the boys average from eight to eighteen years. Thirty-nine were native and 28 were of foreign parentage. Forty were committed by the police court, and 27 by the board of trustees. The expenses of the institution during the year ending the 1st of November, 1874, were \$26,478.53. There was realized from the products of the garden, \$845.80; from the farm and orchard, \$1,312; and from the workshop, \$1,233.93.

The buildings have all been completed within the year, provided with gas and the necessary heating-apparatus. The grounds around the buildings have been partially laid out, and fruit and ornamental trees ordered to be set out this fall and the coming spring. The report as to the condition of the school is quite satisfactory. The progress of education among the boys, as the president reports, is eminently gratifying. They perform their labor on the farm, in the garden, and the workshop with cheerfulness and industry, and their present condition, when contrasted with their former mode of living, is in every point of view a great improvement. Religious services are held on the Sabbath day. The main object of their education is to infuse into their minds correct principles of morals and religion and just ideas of right and wrong.

It is noticeable that so few attempts to escape have been made. The grounds are merely inclosed by the fence which existed on the farm for years prior to its having been purchased for its present purposes. The boys work in the fields with only their teacher, or the farmer or gardener, with them; no guards are required. This speaks well for the kindness and consideration shown to them by the officers of the institution.

Attention is invited to the estimates of appropriations submitted to Congress for this institution. The board of trustees think it very desirable to purchase the remainder of the farm, consisting of about 120 acres, and have submitted an estimate for this purpose of \$12,000. They have also submitted estimates for erecting another family building, \$16,000; for workshops, steam-engine, &c., \$11,000; and for fencing and hedging, \$5,000. The health of the inmates has been unusually good. Few cases required medical treatment, and those of a mild form of miasmatic origin. No deaths have occurred during the year.

I take pleasure in commending this institution to the favorable consideration of Congress. I think its results have proved its value to the community. Boys who heretofore were committed to the workhouses or the jail to associate with old and hardened criminals, from whom they received all the corrupt influences of long lives spent in vice and crime, are now removed from such influences by being placed in this institution, where they are taught to lead lives of industry and usefulness.

An estimate is submitted for a salary to be paid the present president of the school. He has devoted nearly all his time for some years to this institution, and to him, in a great measure, is the credit of the present admirable condition of the school due. I commend this estimate to the favorable attention of Congress.

By the act of June 22, 1874, making appropriations to supply deficien-

cies in the appropriations for the services of the Government for the fiscal years ending June 30, 1873 and 1874, an appropriation of \$31,772.29 was made "to re-imburse the fund of the Reform-School in the District of Columbia for work done and materials furnished in the erection and furnishing of the buildings and grounds for the same;" and the Attorney-General was directed to take such measures as should be most effectual to enforce any right or claim which the United States have to the amount of money or any part thereof now involved in the bankruptcy of Henry D. Cooke and of Jay Cooke & Co., the same having been in the hands of said Henry D. Cooke as treasurer of said Reform-School at the time of his bankruptcy, and being then moneys belonging to the United States; and to inquire into this loss of the public moneys and ascertain who is responsible therefor, and institute such prosecutions as public justice may require, and report his proceedings therein to Congress in his next annual report.

I have corresponded with the Secretary of the Interior, the accounting officers of the Treasury, the president of the Reform-School, and Henry D. Cooke upon this subject. It appears that the balance of said funds remaining unexpended at the time of Mr. Cooke's bankruptcy was \$18,386.58. This amount was on deposit with Jay Cooke & Co. The trustees of the school hold a bond from Mr. Cooke, with sureties for the sum of \$5,000, which is believed to be good. Mr. Cooke takes the ground that, as treasurer of the Reform-School, the moneys appropriated therefor by Congress and deposited with him were not moneys of the United States, but of the corporation of which he was an officer, and claims that this is the view of the accounting officers of the Treasury. Suitable steps have been taken to obtain the amount of said indebtedness, if possible, from the bankruptcy proceedings against Jay Cooke & Co., in Philadelphia.

#### TERRITORIAL PENITENTIARIES.

By the act of June 20, 1874, entitled "An act to amend an act transferring the control of certain territorial penitentiaries to the several Territories in which the same are located," approved January 24, 1873, it is provided that the penitentiaries in the Territories of Montana, Idaho, and Wyoming shall continue under the care and control of the marshals of the United States for said Territories.

The penitentiaries in Montana and Colorado had been, pursuant to the act of January 24, 1873, transferred to the custody and control of the proper authorities of said Territories. This latter act repealed so much of the act of January 10, 1871, placing the penitentiaries in the Territories of Montana, Idaho, Wyoming, and Colorado under the care and control of the marshals of said Territories, and transferred the care and custody of said penitentiaries, the personal property thereunto belonging, and the use and occupation thereof, to said Territories until otherwise ordered by the Attorney-General. No provision had been made by the legislatures of Idaho and Wyoming to receive these penitentiaries, and, in the absence of such legislation, the governors of those Territories were unable to receive the transfer, and therefore the marshals were required to continue the care and custody of the penitentiaries until the proper legislation had been had by the Territories. The act of June 20, 1874, having repealed so much of the act of January 24, 1873, transferring the care and custody of the penitentiaries in the Territories of Montana, Idaho, and Wyoming to said Territories, the penitentiary in Montana has been again taken charge of by the

marshal of that Territory, and those in Idaho and Wyoming continue in the charge of the marshals respectively of those Territories.

Congress at its last session appropriated the sum of \$6,020 for completing fourteen cells, with iron steps and galleries, in the penitentiary of Montana. A contract has been made by the Department for this work; and I am informed by the marshal that the contractor has delivered upon the premises the material for the construction of these cells, and that the work is commenced. It is expected that these cells will be completed within the time specified in the contract.

Congress also appropriated \$7,271 to place the penitentiary of Washington Territory in a suitable condition for the reception and confinement of convicts. The marshal is having the work done, under the direction of this Department; and it is expected that the building will be placed in a proper condition for the confinement of prisoners at an early day.

#### ASSISTANTS TO THE UNITED STATES ATTORNEYS, ETC.

By the act of April 10, 1869, the Attorney-General was required to report to Congress annually the names of all persons employed as assistants to the attorneys of the United States, the business upon which they are engaged, and their compensation; and in compliance with that law I submit the following statement marked Exhibit E.

#### COMPENSATION OF DISTRICT ATTORNEYS AND MARSHALS.

I respectfully renew what I said in my last annual report, as follows

I beg to direct the attention of Congress to the mode of compensating district attorneys and marshals for their services. They are now paid respectively \$200 salary per annum and fees. I think they should be wholly paid by salaries, and all fees, so far as they are chargeable to the United States, should be abolished. These officers, as well as clerks and commissioners, are now directly interested in multiplying the number of prosecutions, and I am satisfied that the Government is subjected to unnecessary expense in consequence of this state of things. Frivolous and vexatious prosecutions ought to be avoided as far as practicable, for considerations that relate to the citizen as well as to the Government. By reference to another part of this report, it will be seen that the salaries of assistant district attorneys are fixed by the Attorney-General, ranging from \$750 to \$5,000 per annum. Making \$6,000 the maximum, as it now is, the salaries of district attorneys might be graduated by the same authority, according to the responsibilities and labor of each officer.

District attorneys, in addition to the prosecution and defense of suits in which the United States are concerned, for which fees are established by law, are required to defend suits brought against officers of the Government for acts done in their official capacity, to examine titles to sites for public buildings, and perform a variety of duties for which they receive extra compensation, to be determined by the Attorney-General. These extra allowances would be unnecessary if they were wholly paid by salaries. Fifty dollars is the highest fee now allowed by law in any case to which the United States are a party, and not unfrequently district attorneys for this small amount are required to conduct a suit where the opposing counsel receives five or ten thousand dollars for their services. I am convinced that the proposed change would be of advantage in every point of view.

#### PENITENTIARY IN THE DISTRICT OF COLUMBIA.

I desire to renew my recommendations made in my last annual report as to the necessity for a penitentiary in this District. At present all convicts sentenced here to imprisonment and hard labor are, under existing contracts, transferred to the penitentiary at Albany, and those convicted in States where there are no suitable penitentiaries for the confinement of United States convicts are also chiefly sent to this insti-



tution. I am informed that without great expense the building in course of erection for a jail in this city could be used as a penitentiary, there being, as I learn, ample room for work-shops and other conveniences necessary to such an institution. This building is not yet completed, and any alterations in its construction that may be necessary can, I understand, easily be made.

I respectfully submit, therefore, to Congress the propriety of making such additional appropriation as may be necessary to carry this plan into execution.

#### JURORS IN THE UNITED STATES COURTS.

In my last annual report I invited attention to the manner in which jurors to serve in the courts of the United States are now drawn, and take the liberty of repeating what I then said, which is as follows:

Jurors to serve in the courts of the United States are now summoned and designated according to the mode practiced for the formation of juries in the courts of the several States. There is no uniformity in this practice, and in many of the States writs of venire are issued by the clerks of the United States courts to the marshals, authorizing them to select such persons as they choose for jurors in such courts. Complaints are made of abuses under this system. Marshals may be induced to summon jurors with a view to pending suits or the granting of personal favors, and in this way influences may be made to operate, which ought, as far as possible, to be excluded from the jury-box. I would respectfully suggest that an act be passed providing a uniform mode of obtaining jurors for the United States courts, the main idea of which should be that the names of a large number of the best-qualified persons residing in the different parts of the district should be returned to the clerks by commissioners or other persons to be designated by the courts for that purpose, and from them, at each term, should be drawn by lot the names of the number of persons necessary to constitute the grand and petit juries for that term. Various provisions of law will, of course, be necessary to give effect to this idea. And I would further suggest that so much of the acts of Congress requiring jurors in the United States courts to possess the qualifications fixed by the laws of the State for jurors in the State court be abolished, as by virtue thereof persons otherwise competent are disqualified as jurors on the ground of color.

#### CRIMINAL PROSECUTIONS.

As a means of expediting the trial of persons charged with crime against the laws of the United States, and diminishing the expenses in relation thereto, in my last annual report I invited the attention of Congress to the propriety of some legislation looking to the trial of persons charged with minor offenses by information filed by the district attorney, instead of the present cumbrous, dilatory, and expensive mode of presentment or indictment by a grand jury. Much of the time of grand juries is now taken up with the investigation of acts which are in themselves mere misdemeanors, thus incurring a large expense by the Government, a great part of which could be saved by the filing of an information by the district attorney without the intervention of the grand jury.

I respectfully invite attention to this subject and to my remarks made in relation to it in my last annual report.

#### AMENDMENT TO THE LAWS RELATING TO THE SETTLEMENT OF ACCOUNTS OF MARSHALS OF THE UNITED STATES.

Several measures were reported by the committee on expenditures in this Department to the House, looking to a reduction of expenditures and holding the officers of the Department charged with disbursements of the public funds to a more rigid accountability; but I regret to say that, owing to the great pressure of other business, these measures were

overlooked, and failed to receive that consideration' which I think they justly deserved.

I desire specially to again invite the attention of Congress to House bill No. 3580, introduced by the chairman of the committee referred to, which was to amend the twenty-third paragraph of section 3 of the act entitled "An act to regulate the fees and costs to be allowed clerks, marshals, and attorneys of the circuit and district courts of the United States, and for other purposes," approved February 26, 1853. I think, with some amendments, the provisions of this bill, if it becomes a law, would exert a restraining influence and a wholesome check upon any officer of the Department who may be inclined to be either careless or extravagant in his expenditures.

#### CLERKS OF COURTS.

A bill was introduced by the chairman of the committee on expenditures in this Department, at the last session of Congress, to which I respectfully invite attention. It is House bill No. 3578, to amend an act to establish the judicial courts of the United States, approved September 24, 1789, in relation to the bonds of the clerks of the courts of the United States. This bill required the clerks to give bond, with sufficient sureties, to be approved by the court for which they are appointed, to the United States in the sum of not less than \$5,000, nor more than \$20,000, to be determined by the Attorney-General, and also provides the mode and manner in which such requirement of the Attorney-General may be enforced.

In many districts the clerks give a bond in the nominal sum of \$2,000, oftentimes with doubtful securities. Some of these clerks receive thousands of dollars annually, belonging to the Government and litigants, and the bonds they are now required to give are no sufficient security, either to the Government or individuals.

A great difficulty exists in obtaining prompt returns, as required by law, of the fees and emoluments of some of the clerks of the courts. I submitted to the chairman of the committee on expenditures in this Department a draught of a bill, which I think, if passed, would cure this evil, which is as follows:

That if the clerk of any court of the United States shall neglect for one year to render to the Department of Justice any return of the fees and emoluments of his office, the Attorney-General shall notify the judge of the court of this fact, and unless the clerk, within sixty days thereafter, makes explanation of the delay satisfactory to the Attorney-General, it shall be the duty of said judge to remove the clerk from office. That the circuit courts of the United States, for the purposes of this act, shall have power to award the writ of mandamus, according to the course of the common law, upon motion of the Attorney-General or district attorney of the United States, to any officer thereof to compel him to make the returns and perform the duties herein required.

#### UTAH TERRITORY.

I desire to invite the attention of Congress to the necessity for additional legislation in and for the Territory of Utah. By the act of June 3, 1874, entitled "An act in relation to courts and judicial officers in the Territory of Utah," it is made the duty of the marshal to execute all writs and processes issued out of the courts. Provision is made for costs in civil cases; but the only provision for the costs and expenses in making arrests, holding and subsisting prisoners, and for the prosecution of crimes committed against the laws of the Territory is, "that the costs and expenses of all prosecutions for offenses against any law

of the territorial legislature shall be paid out of the treasury of the Territory." But Congress has made no provision by which the treasury of the Territory can be reached. I have received a number of communications from the marshal asking what he is to do in the premises.

No appropriation was made by the territorial legislature at its last session to meet the expenses of a large part of such criminal business; and without funds the marshal is unable to serve the process of the courts or arrest and keep in confinement those whose cases are not bailable or who are unable to give the required bail.

I have no authority under the law to advance funds to the marshal out of appropriations under my control for defraying expenses incurred in the arrest and keeping of persons charged with violations of the territorial laws of Utah. In the present condition of affairs, it is not probable that the legislature will make provision for such expenses.

I respectfully invite the early attention of Congress to this important subject, with the request that some additional legislation to cure this defect in the law be had at an early day.

#### MILEAGE TO THE OFFICERS OF THE COURTS.

I desire to invite the special attention of Congress to the proviso in the Army appropriation bill of June 16, 1874, (Laws of the first session of the Forty-third Congress, page 72,) providing "that only actual traveling expenses shall be allowed to any person holding employment or appointment under the United States; and all allowance for mileage and transportation in excess of the amount actually paid is hereby declared illegal, and no credit shall be allowed to any of the disbursing officers of the United States for payment of allowance in violation of this provision."

When the bill was pending in the House, I had the honor to invite the attention of the Appropriation Committee to this provision, and to state wherein it would work a great hardship to the marshals and other officers of the courts of the United States whose compensations were made up of fees, and whose receipts on account of travel made up the major part of such fees, and asked that this proviso be so modified as not to apply to those officers, as I was apprehensive that it would be difficult to find suitable persons to perform the duties of the offices with this law in force. I also invited the attention of the Judiciary Committee of the Senate to the same subject, and informed it that, in my opinion, this provision would greatly embarrass and cripple the executive branch of the courts.

The salaries of the marshals and district attorneys are merely the nominal sum of \$200 per annum, and their compensation otherwise is made up of fees. The marshals are often obliged to travel hundreds of miles to serve process, and the only compensation therefor previous to the passage of the law referred to was their mileage and \$2 for service of original process and 50 cents for subpoena. Now that mileage is no longer allowable, all they can receive for such service is \$2 for original process, 50 cents for subpoena, and their actual expenses; and for the time so employed they receive nothing.

District attorneys are also compelled to travel long distances to attend upon the preliminary examinations before commissioners, or the regular term of the court, for which they formerly received, in addition to the *per diem* and other allowances provided by law, mileage, and in many instances this compensation was inadequate.

Since the adjournment of Congress, a number of the best marshals and

district attorneys have informed me personally that with this law remaining on the books it would be impossible for them to hold their offices or to employ proper persons to act as deputies and assistants.

I may say that the entire compensation of deputy marshals was made up from the mileage allowed; and now that this is taken from them, they can only receive, in addition to their actual expenses, the trifling amount allowed for serving process, and where no service is made, as is frequently the case, they receive nothing. I stated to the officers who called upon me that I would invite the attention of Congress to this law, and urge its modification or repeal so far as it relates to the officers of the courts; and I earnestly hope that early action to this end will be taken by Congress.

I would also recommend additional legislation for the protection of officers of the United States in the performance of their duties.

I think that jurisdiction should be given to the Federal courts to hear and determine prosecutions against those who assault or murder officers of the General Government on account of their official actions.

GEO. H. WILLIAMS,  
*Attorney-General.*

EXHIBIT A.—Statement showing the number of civil suits, to which the United States was a party, pending July 1, 1874, with the number terminated during the fiscal year ending June 30, 1874.

Districts.	Civil suits, to which the United States was a party, pending July 1, 1874.					Civil suits, to which the United States was a party, terminated during the fiscal year ending June 30, 1874.					
	Customs suits.	Internal-revenue suits.	Post-office suits.	Miscellaneous suits.	Total.	Customs suits.	Internal-revenue suits.	Post-office suits.	Miscellaneous suits.	Total.	Customs suits. Judgment for United States. Judgment for defendant.
Alabama, northern district		54	9		63						
Alabama, middle district		6	13		19				11	11	
Alabama, southern district	1	2	1	2	6	1			3	4	1
Arkansas, eastern district		4	1	3	8		6		23	29	
Arkansas, western district			1	100	101		1	1	2	4	
California	30	14	12	22	78	6	15		1	22	5
Connecticut	1	7		3	11	5	6	2		13	1 1
Delaware	6	1	1	2	10		1			1	
Florida, northern district	7	9	7	7	30	3		8		11	2
Florida, southern district				1	1						
Georgia, northern district		19	3		22		84	7	1	92	
Georgia, southern district		8	2		10	1	7	2	13	23	
Illinois, northern district		25	2	1	28	1	19			20	
Illinois, southern district		17		5	22		20	3	1	24	
Indiana		5	2		7		20	1	6	27	
Iowa		9	2	6	17		12	3	3	18	
Kansas		2	3	12	17		1	9	5	15	
Kentucky		15			15		117	2		119	
Louisiana	39	55	4	2	100	38	4	4	4	50	27 6
Maine	18	1	1	2	22	3	2		4	9	3
Maryland	4	9	2	16	31	2	12		102	116	1
Massachusetts	129	90	2	16	237	56	15	1	9	81	9
Michigan, eastern district						13			4	17	11
Michigan, western district				8	8				1	1	
Minnesota		10	4	4	18		3	1		4	
Mississippi, northern district		20	1	8	29		11	6	2	19	
Mississippi, southern district		2	2		4	1	9	7	8	25	1
Missouri, eastern district		21		13	34	4	14		20	38	1
Missouri, western district		4	3	1	8		2	2	13	17	
Nebraska		6			6		1			1	
Nevada *											
New Hampshire		1		1	2				4	4	
New Jersey	33	3	1	4	41	5	7	1	2	15	4 1
New York, northern district	11	26	1	24	62	12	7	2	40	61	2
New York, southern district	3,398	714	8	200	4,320	934	60	2	40	1,036	179 64
New York, eastern district	4	55		25	84	7	32		36	75	6
North Carolina, eastern district		11	1	2	14	1	15	4	25	45	1
North Carolina, western district		69	1	37	107		36	2		38	
Ohio, northern district		17		4	21	2	8			10	1
Ohio, southern district		7	1	9	17		21	3	16	40	
Oregon				4	4			1		1	
Pennsylvania, eastern district	51	211	5	59	326	15	24		4	43	1
Pennsylvania, western district	2	88	13	21	129		17	10	5	32	
Rhode Island	2	3		1	6	1			2	3	
South Carolina		8	3	44	55	1	11	2	2	16	
Tennessee, eastern district		22		4	26		13	1	2	16	
Tennessee, middle district		89	1	6	96	1	92	1	5	99	1
Tennessee, western district	4	197	1	17	219		66	2	67	135	
Texas, eastern district	6	18	4	4	32		89			89	
Texas, western district	1	2	8	104	115	1	2	11	78	92	
Vermont	20	1		3	24	17			5	22	10
Virginia, eastern district		5		2	7		18	2	1	21	
Virginia, western district		29		7	36		67	2	19	88	
West Virginia		12	1	5	18		1	1	1	3	
Wisconsin, eastern district	2	2		1	5		1		3	4	
Wisconsin, western district		7		3	10		8			8	
Arizona*											
Colorado		1		30	31				1	1	
Dakota								1		1	
District of Columbia*											
Idaho				2	2						
Montana				2	2				1	1	
New Mexico	2		1	69	72	1		1	7	9	1
Utah		1	2	1	4			1	233	234	
Washington	1			4	5	1				1	
Wyoming							1		4	5	
Total of each class of cases	3,772	2,014	135	933	6,854	1,133	978	109	838	3,058	35 5

## 23

**Civil suits to which the United States was a party, terminated during the fiscal year ending June 30, 1874.**

Customs suits.				Internal-revenue suits.				Post-office suits.				Miscellaneous suits.			
Dismissed or discontinued.	Total.	Appealed from district to circuit.	Appealed from circuit to Supreme.	Judgment for United States.	Judgment for defendant.	Dismissed or discontinued.	Total.	Appealed from district to circuit.	Appealed from circuit to Supreme.	Judgment for United States.	Judgment for defendant.	Dismissed or discontinued.	Total.	Appealed from district to circuit.	Appealed from circuit to Supreme.
1	1			5		1	6								1
1	6			1		2	1			1			1		
3	5			13		2	15			2			2		2
1	3			4		1	6			6		2	8		
1												1	7		
1	1			49	11	24	84			6		1	7		
1	1			5		2	7			2			2		
				13	1	5	19			3			3		
				11	6	3	20			1			1		
				3		17	20			3			3		
				6	4	2	12			3			3		
				1			1			9			9		
5	38		1	105	7	5	117			2			2		
1	3			4			4			3		1	4		2
1	2			2			2								
47	56			4	4	4	12								
1	13			7		8	15			1		1	1		1
				2		1	3			1			1		1
				11			11			4		2	6		
2	4			2	1	6	9			7			7		
				9		5	14								
				2			2			2			2		
				1			1						13		
				7			7			1			1		
10	12	1		1	1	5	7			2			2		
691	934	7	9	24	15	21	60		7			2	2		
1	7			29		3	32	6		4			4		
	1			13	2		15			2			2		
1	2			33		3	36								
				3		5	8								
				11	6	4	21		1	2		1	3		
										1			1		
14	15			15	4	5	24		1						
1	1			10	1	6	17			10			10		
				5	4	2	11			1		1	2		
				10	1	2	13	1	1	1			1		
				46	13	33	92			1			1		
				11	6	49	68			2			2		
		6	2	81	8		89								
1	1			2			2			11			11		
7	17														
				13	1	4	18			1		1	2		
				48	15	4	67			1	1		2		
				1			1			1			1		

**received.**



## EXHIBIT A.—Statement showing the number of civil suits, &amp;c.—Continued.

Districts.	Aggregate amount, Judgment for which has been in favor of United States.	Amount actually realized.
Alabama, northern district.....		
Alabama, middle district.....		
Alabama, southern district.....	\$212 33	\$212 33
Arkansas, eastern district.....	5,172 00	11,546 31
Arkansas, western district.....	9,450 00	731 55
California.....	49,267 00	40,909 72
Connecticut.....	6,545 89	6,012 35
Delaware.....		
Florida, northern district.....	15,593 58	832 54
Florida, southern district.....		
Georgia, northern district.....	11,565 98	1,120 42
Georgia, southern district.....	20,592 92	1,229 39
Illinois, northern district.....	85,646 97	43,412 39
Illinois, southern district.....	222,578 21	6,022 00
Indiana.....	27,043 99	10,776 34
Iowa.....	9,751 65	6,273 35
Kansas.....	10,168 00	1,100 00
Kentucky.....	28,542 60	19,211 22
Louisiana.....	162,143 00	17,077 00
Maine.....	2,088 43	2,022 63
Maryland.....	5,123 64	2,423 34
Massachusetts.....	11,531 10	10,939 44
Michigan, eastern district.....	3,878 15	1,452 12
Michigan, western district.....	600 00	
Minnesota.....	1,375 77	
Mississippi, northern district.....	12,707 81	233 00
Mississippi, southern district.....	11,274 97	2,642 44
Missouri, eastern district.....	12,633 35	1,370 51
Missouri, western district.....	11,944 93	1,106 41
Nebraska.....	6,437 47	6,437 47
Nevada, (no report received).....		
New Hampshire.....	4,000 00	
New Jersey.....	9,857 40	5,779 55
New York, northern district.....	77,551 00	56,409 14
New York, southern district.....	631,349 30	395,353 22
New York, eastern district.....	76,870 84	12,257 22
North Carolina, eastern district.....	50,922 40	19,116 41
North Carolina, western district.....	7,874 15	2,724 56
Ohio, northern district.....	500 00	
Ohio, southern district.....	77,506 32	16,008 22
Oregon.....	217 00	217 00
Pennsylvania, eastern district.....	89,487 03	21,622 22
Pennsylvania, western district.....	27,178 74	14,004 66
Rhode Island.....	2,866 08	2,322 24
South Carolina.....	509 39	400 00
Tennessee, eastern district.....	4,177 09	422 55
Tennessee, middle district.....	13,480 20	2,422 11

\* \$1,265.27 realized on judgments of former years.    † \$379.87 realized on judgments of former years.



EXHIBIT A.—Statement showing the number of civil suits, &c.—Continued.

Districts.	Aggregate amount, judgment for which has been in favor of United States.	Amount actually realized.
Tennessee, western district .....	\$31,035 12	\$16,725 00
Texas, eastern district.....	14,695 82	12,695 82
Texas, western district .....	77,542 46	.....
Vermont .....	20,765 50	20,765 50
Virginia, eastern district.....	1,794 34	1,741 42
Virginia, western district .....	9,676 34	1,418 07
West Virginia .....	6,851 38	590 90
Wisconsin, eastern district .....	250 00	250 00
Wisconsin, western district.....	1,415 00	1,198 00
Arizona, (no report received).....	.....	.....
Colorado .....	1,000 00	1,206 64
Dakota.....	114 12	114 12
District of Columbia, (no report received).....	.....	.....
Idaho .....	3,439 20	.....
Montana .....	.....	.....
New Mexico .....	34,712 73	.....
Utah.....	477 27	.....
Washington.....	166 34	.....
Wyoming.....	257 88	257 88
Total.....	2,021,724 31	867,192 18

EXHIBIT B.—*Statement showing the number of criminal cases pending in the circuit and disposed of during the fiscal year*

strict courts of the United States on the 1st day of July, 1874, with the number terminated ending June 30, 1874.

terminated during the fiscal year ending June 30, 1874.

Internal revenue.		Post-office.		Enforcement acts.				Naturalization laws.				Embezzlement.				Miscellaneous.				
Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.	Convictions.	Acquittals.	Nolled, discontinued, or quashed.	Total.			
3	25			1	1	1	1		2							4	3			
19	30	1			1									6		1	7			
196	265	2	1		3			5	5					32	11	23	65			
6	6	3			3									48	23	35	106			
																1	1			
2	2					4		13	17			1	2	1		2	3			
69	245		1	2	3			6	6							1	8			
2	12	2			2			1	1							1	7			
	3	15	1	1	17					1			1	1		2	3			
3	54	1		2	3									4		8	12			
30	82	3		3	6								2	4	2	9	15			
20	140	4			4									37	13		50			
2	18	3		2	5								1	10	6	32	48			
9	49	3			3		144		44											
	2	1	1	1	3									2			2			
9	19	2	1	2	5	1	2	8	11			1		2	1	3	6			
60	96	13		6	19								1	30	10	1	41			
34	70	13	1		14	2			2					12	1	14	27			
2	9			1	1									9		2	11			
1	3	3			3									4		2	6			
13	57	1	1		2	57	37	26	120			2	4	7	2	21	30			
11	135	1			1							1	1		1	1	2			
39	130			2	2								1	2	7	1	10			
44	78	5		1	6															
25	72	3	1	3	7									10	2	12	24			
														11	2	10	23			
2	5	2	1	7	10												1			
15	37	4		1	5									4	1	2	7			
23	52	22	1	2	25	2	1		3					10	9	2	21			
	3	11		1	12							3		8	1	4	13			
8	10	2			2									1		1	2			
25	62	8	1	1	10	26	2	1	29					1		8	13			
69	326	1			1	9		143	152			1		11	7	1	19			
18	63	15		3	18									3		6	9			
10	23	3		2	5									6	3	4	13			
2	8	1	3		4									16	8	6	30			
6	13	2		1	3									9	2	44	55			
5	30	3		1	4									13		3	18			
2	4	1			1			2	2					1			1			
38	107	1			1			555	555					4	1	2	7			
115	253	2			2		1		1			1		24	2	63	89			
14	63			1	1		2	3	3					4	1	2	7			
27	62	2	1	3	6			3	3					1		4	5			
9	9													1	1	1	3			
143	261		1	4	5			6	6				1	7		5	12			
1	3																			
3	7			1	1												2			
28	57	2	1		3		2		2			1		2	2	5	9			
57	113	1			1							1		1			1			
		1			1									4	1	1	6			
	2													2			2			
17	27	1	1	2	4									1	3	19	23			
6	9													10	16	17	43			
														128	47	78	253			
												1		5	1	1	7			
4	4													5	6	6	17			
5	53	4	7	1	12								2	4	12	4	20			
														28	4	6	38			
7	14													1	3	2	6			
1, 252	3, 291	168	25	58	251	102	92	772	966	1	.....	1	11	4	22	37	553	224	493	1, 270

† Decided on demurrer in Supreme Court.

## EXHIBIT C.—Statement showing the number of civil suits, to which the United States was not during the fiscal year

Districts.	Number commenced during the fiscal year ending June 30, 1874.				Number terminated during the fiscal year ending June 30, 1874.			
	Admiralty.	Bankruptcy.	Other suits.	Total.	Admiralty.	Bankruptcy.	Other suits.	Total.
Alabama, northern district.....		18		18		2		2
Alabama, middle district.....		40		40		26		26
Alabama, southern district.....	5	14	45	64	3	3	48	54
Arkansas, eastern district*								
Arkansas, western district.....		3	22	25		1	16	17
California.....	62	161	120	343	46	34	52	132
Connecticut.....	8	85	72	165	8	53	63	124
Delaware.....	3	7	21	31		7	6	13
Florida, northern district*								
Florida, southern district.....	38		1	39	34		1	35
Georgia, northern district.....		200	41	241		108	77	185
Georgia, southern district.....	3	365	122	490	4	34	397	435
Illinois, northern district.....	121	377	2,445	2,943	98	181	2,027	2,306
Illinois, southern district.....	15	123	698	836	2	81	452	535
Indiana.....	9	225	852	1,086	6	125	346	477
Iowa.....	2	111	641	754	2	35	478	515
Kansas.....		25	298	323		15	65	80
Kentucky.....		456	35	491		211	29	240
Louisiana.....	157	109	120	386	70		12	82
Maine.....	18	74	66	158	22	56	32	110
Maryland.....	69	52	48	169	43	26	19	88
Massachusetts.....	112	88	450	650	120	43	383	546
Michigan, eastern district.....	277	159	270	706	178	69	166	413
Michigan, western district.....	8	84	172	264	4		68	76
Minnesota.....	10	74	182	266				
Mississippi, northern district.....		37	61	98		46	55	101
Mississippi, southern district.....	11	77	57	145	17		35	52
Missouri, eastern district.....	226	148	65	439	192	84	41	317
Missouri, western district*								
Nebraska.....	1	33		34	1	10		11
Nevada*								
New Hampshire.....			25	25			12	12
New Jersey.....	16	21	55	92	9	8	14	31
New York, northern district.....	32	570	96	698	16	186	27	229
New York, southern district.....	245	825	460	1,530	185	488	110	783
New York, eastern district.....	352	148	87	587	122	91	13	226
North Carolina, eastern district.....		9	41	50		2	49	51
North Carolina, western district.....		197	37	234		393	29	422
Ohio, northern district.....	165	89	146	400	123	15	59	197
Ohio, southern district.....	32	179	147	358	23	240	167	430
Oregon.....	16	28	24	68	13	22	3	38
Pennsylvania, eastern district.....	119	224	239	582	72	77	135	284
Pennsylvania, western district.....	27	287	597	911	27	136	149	312
Rhode Island.....	55	39	18	112	1	24	16	41
South Carolina.....	12	169	64	245	6	153	17	176
Tennessee, eastern district.....		3		3		3	12	15
Tennessee, middle district.....	1	71	61	133		28	70	99
Tennessee, western district.....	25	63	156	244	22	48	76	146
Texas, eastern district.....	27	29	65	121	11	8	75	94
Texas, western district*								
Vermont.....		75	65	140		62	53	115
Virginia, eastern district.....	68	371	59	498	60	174	73	307
Virginia, western district.....		581	52	633		227	25	252
West Virginia.....	7	17	39	63	5	29	34	68
Wisconsin, eastern district.....			1	1				
Wisconsin, western district.....	2	41	157	200	1	20	101	122
Arizona*								
Colorado.....		22		22		5		5
Dakota.....								
District of Columbia*								
Idaho.....								
Montana.....		5		5		3		3
New Mexico.....			6	6			2	2
Utah.....		13		13		3		3
Washington.....	6	10		16	6	6		12
Wyoming.....								
Total of each class of cases....	2,362	7,231	9,601	19,194	1,552	3,703	6,235	11,490

\* No report

a party, commenced and terminated in the circuit and district courts of the United States ending June 30, 1874.

Number terminated during the fiscal year ending June 30, 1874.

Admiralty.				Bankruptcy.				Other suits.			
Judgment for plaintiff.	Judgment for defendant.	Not stated.	Total.	Judgment for plaintiff.	Judgment for defendant.	Not stated.	Total.	Judgment for plaintiff.	Judgment for defendant.	Not stated.	Total.
						2	2				
						26	26				
	3		3		3		3	31	17		48
					1		1	11	5		16
32	14		46			34	34	19	29	4	52
		8	8			55	55	34	10	19	63
						7	7	2	1	3	6
34			34								
						108	108		1		1
2	2		4			24	24	42	35		77
78	20		98	9	1	181	181	358	39		397
2			2	46	35	81	125	901	1,126		2,027
3	2	1	6	5	12	108	125	309	123	20	452
	2		2			35	35	174	27	145	346
				7		8	15	303		175	478
						211	211	40	4	41	85
41	29		70					22	7		29
13	9		22	1		55	56	11		1	12
11	9	23	43	11	15		26	15	13	10	38
50	68	2	120	12	31		43	10	2	1	19
169	9		178	64	5		69	42	44	297	383
2	2		4					145	21		166
								66	12		88
						46	46				
14	3		17					31	24		55
172	7	13	192			84	84	20	15		35
								16	8	17	41
		1	1			10	10				
9			9	5	3		8	4	3	5	12
		15	16			186	186	8	6		14
90	25	70	185	264	211	13	488	2	1	24	27
117	5		122			91	91	41	21	48	110
				2			2			13	13
						393	393	26	23		49
122	1		123		15		15	26	3		29
11	12		23			240	240	34	25		59
4	2	7	13			22	22	84	83		167
49	23		72			77	77	1	2		3
17		10	27			136	136	89	46		135
		1	1			24	24	114	7	28	149
5	1		6			153	153	4	4	2	10
						3	3	15	2		17
				28			28	13	5		18
11	11		22			48	48	58	12		70
5	6		11			8	8	31	45		76
								50	25		75
				21	6	35	62			53	53
44	16		60			174	174	41	32		73
				13		214	227	10		15	25
4	1		5			29	29	30	4		34
		1	1								
						5	5	69	2	37	101
				1	2		3				
						3	3	1	1		2
4	2		6	5	1		6				
1,115	285	152	1,452	494	341	2,868	3,703	3,346	1,921	968	6,235

received.

## EXHIBIT C.—Statement showing the number of civil suits, to which the United States was

Districts.	Amount of judgments for plaintiffs.	
	Admiralty.	Bankruptcy.
Alabama, northern district.....		
Alabama, middle district.....		
Alabama, southern district.....		
Arkansas, eastern district, (no report received) .....		
Arkansas, western district .....		
California .....	\$57,834 13	
Connecticut .....		
Delaware.....		
Florida, northern district, (no report received) .....		
Florida, southern district.....	75,491 54	
Georgia, northern district.....		
Georgia, southern district.....	644 73	\$12,562 35
Illinois, northern district.....	14,125 78	
Illinois, southern district.....	159 40	
Indiana .....	1,240 00	
Iowa .....		
Kansas.....		5,500 00
Kentucky .....		
Louisiana .....	58,215 00	
Maine.....	4,025 44	1,233 91
Maryland .....	2,585 26	
Massachusetts .....	51,531 62	
Michigan, eastern district .....	32,825 94	10,105 52
Michigan, western district .....	297 75	
Minnesota.....		
Mississippi, northern district.....		
Mississippi, southern district.....	2,820 95	
Missouri, eastern district .....		
Missouri, western district, (no report received) .....		
Nebraska .....	75 00	
Nevada, (no report received) .....		
New Hampshire.....		
New Jersey .....		776 12
New York, northern district .....		
New York, southern district .....	428,295 92	
New York, eastern district.....	50,440 60	
North Carolina, eastern district .....		19 30
North Carolina, western district.....		
Ohio, northern district .....	8,517 45	
Ohio, southern district .....	19,820 15	
Oregon .....	6,271 71	
Pennsylvania, eastern district.....	49,996 73	
Pennsylvania, western district .....	80,194 86	
Rhode Island.....		
South Carolina .....	940 36	
Tennessee, eastern district.....		
Tennessee, middle district .....		
Tennessee, western district .....	8,759 91	
Texas, eastern district .....	2,020 00	
Texas, western district, (no report received) .....		
Vermont.....		
Virginia, eastern district.....		
Virginia, western district .....		
West Virginia.....	4,284 17	
Wisconsin, eastern district.....		
Wisconsin, western district .....		
Arizona, (no report received).....		
Colorado .....		
Dakota .....		
District of Columbia, (no report received) .....		
Idaho .....		
Montana .....		
New Mexico.....		
Utah .....		
Washington.....		
Wyoming .....		
Total of each class of cases .....	962,074 40	30,203 55

31

[illegible]



## REPORT OF THE ATTORNEY-GENERAL.

EXHIBIT D.—Statement of expenditures made from the appropriation for expenses of the courts of the United States during the fiscal year ending June 30, 1874.

Districts.	Marshals.	District attor- neys, special counsel, &c.	Clerks.		Total.
Alabama, northern district.	\$5,000 00			\$379 95	\$5,000 00
Alabama, middle district.	6,500 00			305 95	7,501 95
Alabama, southern district.	11,606 00	\$1,940 00	\$693 65		16,698 90
Arkansas, eastern district.	22,998 00	1,930 00	973 63	643 10	25,606 36
Arkansas, western district.	60,765 00	2,177 00	1,967 15	2,562 45	64,167 35
California.	26,613 00	6,466 78	4,036 00	1,233 80	36,338 59
Connecticut.	5,150 00	597 03	201 75	66 90	6,483 97
Delaware.	4,404 00	390 00	165 75	15 65	4,975 40
District of Columbia.	82,947 00	33,486 16	8,907 73	13 80	129,365 28
Expenses United States jail.					43,762 01
Florida, northern district.	24,140 00	832 40	413 90	97 00	27,199 90
Florida, southern district.	6,000 00	280 00	153 40	18 10	7,143 50
Georgia, northern district.	57,260 00	5,650 80	3,605 10	1,851 90	69,867 80
Georgia, southern district.	19,315 00			494 00	19,799 00
Illinois, northern district.	28,735 00	4,330 00	606 25	922 25	34,637 00
Illinois, southern district.	97,500 00	2,975 80	300 00	840 35	99,454 75
Indiana.	11,871 00	2,456 60	972 00	539 95	15,829 55
Iowa.	64,863 00	8,345 19	2,507 95	880 55	77,331 61
Kansas.	58,800 00	3,443 00	767 75	2,330 50	65,905 25
Kentucky.	55,450 00	6,952 00	2,035 75	1,367 00	67,799 25
Louisiana.	61,260 00	4,085 00	300 45	2,174 15	69,000 35
Maine.	12,903 00		395 60	56 75	13,357 35
Maryland.	26,300 00	6,377 50	1,465 08	1,369 30	34,531 48
Massachusetts.	36,451 00	7,140 00		2,145 45	46,736 45
Michigan, eastern district.	22,565 00	4,275 00	819 30	574 80	30,233 67
	13,567 00	1,466 40	449 85	469 30	16,532 65
	25,330 00	1,191 15	834 15	1,163 05	28,006 31
	29,920 00	4,491 90	1,464 15	941 35	36,806 00
	38,000 00	4,136 65	190 00	91 80	42,358 65
	34,003 00	4,139 55	975 25	1,550 40	40,658 90
	45,753 00	3,103 33	1,625 55	742 95	50,657 43
	34,394 00	2,611 00	1,169 96	430 95	39,600 91
	3,328 00		340 60		3,678 60
	7,000 00	467 60	925 89	134 10	8,507 59
	15,927 00	1,895 00	1,298 75	679 95	20,130 90
	87,832 94	12,961 40	2,970 05	9,506 83	113,309 39
	90,000 00	30,176 09	2,690 00	2,812 75	121,888 05
	18,046 00	4,418 45	790 00	2,016 30	25,234 65
	142,733 00	4,418 45	1,817 37	574 30	147,516 97
		2,979 00	3,979 03	11,907 80	147,516 97
		2,979 00	3,979 03	1,077 15	20,147 29
		18,952 33	2,367 40	1,371 00	20,147 29
		2,435 00	2,435 00	94 90	23,335 35
		2,435 00	2,435 00	94 90	23,335 35

Pennsylvania, western district	43,046 00	4,920 60	1,512 65	153 05	50 00	49,722 30
Rhode Island	6,930 00	4,236 00	297 05	243 07		11,736 12
South Carolina	44,658 00	9,486 20	2,078 95	5,130 90	200 00	61,554 05
Tennessee, eastern district	57,282 39	9,762 45	4,736 44	1,263 00	204 11	73,248 39
Tennessee, middle district	32,500 00	3,296 50	1,634 71	646 95		38,678 16
Tennessee, western district	35,000 00	3,032 10	1,534 25	2,498 75	1,975 00	44,040 10
Texas, eastern district	20,000 00	1,055 00	1,634 09	39 00	600 00	23,328 09
Texas, western district	57,290 00	905 60	3,241 42	5,257 60	2,062 50	69,892 12
Vermont	10,235 00	895 10	1,437 20	51 05		13,218 35
Virginia, eastern district	16,905 22	3,927 30	1,535 40	804 85		23,172 77
Virginia, western district	26,652 00	2,207 80	1,062 00	626 67	650 00	31,198 47
West Virginia	20,766 00	1,793 40	698 25	14 50		23,273 15
Wisconsin, eastern district	16,064 00	891 80	1,029 25	502 65		18,557 70
Wisconsin, western district	14,207 00	6,609 20	1,488 45	201 15		22,505 80
Territories:						
Arizona		600 00	109 75	11 70		721 45
Colorado	20,000 00	1,595 67	844 05	214 80	300 00	22,954 52
Dakota	41,768 00	3,107 00	250 92	627 85	1,770 00	47,124 37
Idaho	13,485 00	899 00	495 05		750 00	15,629 05
Montana	25,835 00	1,367 00	748 05	28 10	1,014 00	28,992 15
New Mexico	42,307 00	15 00	1,778 65	83 95		44,184 60
Utah	7,941 63		85 00			8,026 63
Washington	39,662 00	2,703 00	1,140 45	353 95		43,860 60
Wyoming	14,341 00	1,400 00	904 55	68 45	1,350 00	18,064 00
Total	2,071,332 18	275,476 90	89,063 85	75,630 10	86,335 58	2,669,730 81

## EXHIBIT E.—Statement showing the number of assistants to the United States attorneys, their employment, and compensation.

District.	Name.	Employment.	Compensation.
Alabama, southern district...	J. H. Wallace.....	Regular assistant.....	\$1,500.00
Do .....	L. E. Parsons.....	Special assistant in cases arising under the enforcement acts.	Undetermined
Arkansas, western district...	William Walker.....	Special assistant in United States case <i>versus</i> H. Snyder.	100.00
Do .....	B. T. Duval.....	Special assistant in investigation in the western district of Arkansas.	Undetermined
California .....	A. P. Van Duzer.....	Regular assistant.....	2,500.00
Do .....	J. M. Coghlan.....	Regular assistant.....	4,000.00
Do .....	L. D. Latimer.....	Special assistant in United States cases of title to light-house sites.	Undetermined
Connecticut .....	W. C. Strawbridge.....	Regular assistant.....	1,000.00
District of Columbia .....	R. Harrington.....	Regular assistant.....	2,500.00
Florida, northern district.....	W. G. M. Davis.....	Special assistant in case of United States <i>versus</i> H. Jenkins, jr.	2,500.00
Georgia .....	G. S. Thomas.....	Regular assistant.....	2,500.00
Do .....	A. T. Akerman.....	Special assistant in United States case against Georgia Railroad and Banking Company.	Undetermined
Do .....	H. Hilliard.....	Special assistant in United States case <i>versus</i> T. G. Simma.	Undetermined
Illinois, northern district.....	L. H. Bontelle.....	Regular assistant.....	3,000.00
Do .....	H. T. Glover.....	Regular assistant.....	1,200.00
Illinois, southern district.....	E. T. Roe.....	Regular assistant.....	1,500.00
Indiana .....	C. L. Holstein.....	Regular assistant.....	2,000.00
Iowa .....	J. M. Bailon.....	Regular assistant.....	1,500.00
Do .....	L. R. Seaton.....	Regular assistant.....	2,500.00
Do .....	D. B. Henderson.....	Special assistant in United States case <i>versus</i> Rhomberg.	Undetermined
Kansas .....	T. Ryan.....	Regular assistant.....	1,500.00
Kentucky .....	W. A. Bullitt.....	Regular assistant.....	2,500.00
Louisiana .....	R. Hutcheson.....	Regular assistant to April, 1874	2,500.00
Do .....	J. W. Gurley.....	Regular assistant.....	2,500.00
Maryland .....	A. M. Rogers.....	Regular assistant.....	2,500.00
Massachusetts .....	E. L. Barney.....	Regular assistant.....	3,500.00
Do .....	W. A. Hayes, jr.....	Regular assistant.....	1,500.00
Do .....	P. Cummings.....	Regular assistant from September, 1874.	2,500.00
Do .....	F. Dabney.....	Regular assistant to September, 1874.	2,500.00
Michigan, eastern district.....	J. W. Finney.....	Regular assistant.....	2,500.00
Do .....	H. H. Swan.....	Regular assistant.....	2,500.00
Michigan, western district.....	W. D. Fuller.....	Regular assistant.....	1,500.00
Mississippi, northern district.....	B. W. Lee.....	Regular assistant.....	2,500.00
Mississippi, southern district.....	W. H. Parker.....	Regular assistant to July 1, 1874	2,500.00
Do .....	J. M. McKee.....	Regular assistant from July 1, 1874.	2,500.00
Missouri, eastern district.....	W. H. Bliss.....	Regular assistant.....	2,500.00
Missouri, western district .....	H. B. Johnson.....	Regular assistant.....	2,500.00
New Jersey .....	J. J. King.....	Regular assistant.....	1,500.00
New York, northern district.....	A. W. Brazee.....	Regular assistant.....	2,500.00
Do .....	J. E. Pound.....	Regular assistant.....	2,500.00
Do .....	J. A. Murray.....	Regular assistant from July 1, 1874.	1,500.00
New York, southern district .....	H. E. Tremain.....	Regular assistant.....	2,500.00
Do .....	T. Simons.....	Regular assistant.....	2,500.00
Do .....	A. H. Purdy.....	Regular assistant.....	3,500.00
Do .....	R. M. Sherman.....	Regular assistant.....	2,500.00
Do .....	J. A. Goodlett.....	Regular assistant.....	2,500.00
Do .....	E. H. Smith.....	Regular assistant.....	2,500.00
Do .....	L. F. Post.....	Regular assistant.....	1,500.00
Do .....	J. J. Hoffman.....	Regular assistant.....	1,500.00
Do .....	M. A. Friend.....	Special assistant in United States case <i>versus</i> Butler <i>et al.</i>	Undetermined
New York, eastern district .....	W. D. Hughes.....	Regular assistant to April 15, 1874.	2,500.00
Do .....	G. W. Hoxie.....	Regular assistant.....	2,500.00
Do .....	H. G. Hull.....	Regular assistant from April 15, 1874.	2,500.00
North Carolina, eastern dist.....	W. H. Young.....	Regular assistant.....	500.00
North Carolina, western dist.....	W. S. Ball.....	Regular assistant.....	1,500.00
Do .....	M. Erwin.....	Regular assistant.....	\$300 per year
Ohio, northern district .....	H. S. Sherman.....	Regular assistant.....	2,500.00
Ohio, southern district.....	C. Richards.....	Regular assistant.....	2,500.00
Do .....	R. Dyer.....	Regular assistant.....	2,500.00

## EXHIBIT E.—Statement showing the number of assistants, &amp;c.—Continued.

District.	Name.	Employment.	Compensation.
Ohio, southern district .....	H. Hooper .....	Regular assistant to February, 1874.	\$2,500 00
Do .....	C. G. Jahn .....	Regular assistant to December, 1873.	1,500 00
Pennsylvania, eastern district.	J. R. Valentine.....	Regular assistant.....	3,000 00
Do .....	G. L. Douglass .....	Regular assistant.....	Without compensation.
Pennsylvania, western district	T. A. Pender.....	Regular assistant.....	1,200 00
Do .....	A. A. Adams.....	Regular assistant.....	2,500 00
South Carolina .....	W. Stone.....	Regular assistant.....	2,000 00
Do .....	W. E. Earle.....	Regular assistant.....	2,500 00
Tennessee, eastern district ...	A. H. Pettibone.....	Regular assistant.....	2,000 00
Tennessee, middle district ...	H. Harrison.....	Regular assistant.....	1,500 00
Tennessee, western district ..	J. B. Clough .....	Regular assistant.....	1,500 00
Texas, western district.....	W. E. Horne.....	Special assistant in United States cases arising under the enforcement acts.	Undetermined.
Vermont .....	J. D. Peck .....	Regular assistant.....	750 00
Do .....	J. W. Stewart.....	Special assistant in United States case <i>versus</i> Crane and Jewett.	Undetermined.
Virginia, eastern district .....	W. F. Worthington.	Regular assistant.....	2,000 00
Do .....	L. H. Chandler.....	Special assistant in United States cases arising under the enforcement acts.	750 00
Do .....	A. Morton .....	Special assistant in United States cases arising under the enforcement acts.	750 00
Virginia, western district .....	D. S. Lewis .....	Regular assistant.....	2,000 00
West Virginia.....	G. B. Caldwell .....	Regular assistant.....	500 00
Wisconsin, western district ..	J. C. McKinney.....	Regular assistant.....	2,000 00



---

---

**REPORT OF WARDEN OF THE UNITED STATES JAIL.**

---

---





# ANNUAL REPORT

## OF THE

### WARDEN OF THE UNITED STATES JAIL.

---

WASHINGTON, D. C., *November 2, 1874.*

SIR: The undersigned, warden of the United States jail in the District of Columbia, most respectfully presents his annual report, showing the management and condition of that institution during the year ending October 31, 1874, as required by the act of Congress approved March 5, 1872.

When my last annual report was submitted, it was hoped that the new jail-building, then in process of construction under a law of Congress, would have been completed and occupied previous to this time, but, I regret to state, such hope has not been realized.

The new jail is not yet completed, and we are still occupying the old building, which, with its wants of capacity, defective ventilation, and faulty construction, is but a poor apology for a jail, and would not be used as a place of incarceration of prisoners, only on account of absolute necessity.

It has been faithfully described heretofore, and often condemned by those in authority; therefore any further description of it is deemed unnecessary in this report. In order to occupy the building, some repairing has been necessary; but in view of the construction of a new building, no general repairs have been deemed advisable, and such only as were necessary for temporary purposes have been made.

The old building, which was intended to accommodate sixty or eighty persons, and was supposed to be crowded to its utmost capacity when its numbers were one hundred and fifty, has been required to accommodate two hundred and twenty-one at a time during the past year.

The health of the prisoners has been generally good. No contagious or epidemic disease has visited the institution during the year, and but one death has occurred. This, when we consider the crowded condition of the building, its faulty arrangements, and want of proper ventilation and sewerage, is a result truly gratifying, and has been produced, in a great measure, by the best of medical treatment and the most rigid sanitary measures. Lime and the chloride of lime and carbolic purifying-powders have been used as disinfectants; but lime in its simple form has been most relied on. Indeed, I have found by experience that pure lime sprinkled freely about the cells and corridors, and applied frequently as a whitewash on the walls, is the best conservator of health of any disinfectant we have used. Lime, when used in this form, even if only applied within a portion of the cells and rooms at a time, seems to permeate the atmosphere of the whole building and destroy its impurities and noxious influences. Hence, in addition to sprinkling lime throughout the cells and corridors daily, I have caused whitewashing to be carried on in some portion of the building more or less every week, with the gratifying results above mentioned.

The officers employed here, as a rule, have been vigilant and attentive to duty. The rules governing the institution have been carried into execution, and, as a consequence, I have the satisfaction of again stating in my annual report that, notwithstanding the unsafe, unreliable, and dilapidated condition of the jail-building, not a prisoner has escaped during the year; for which I render to the deputy-warden and guards well-merited commendation.

Several earnest Christian gentlemen, of the Young Men's Christian Association, have held religious exercises at the jail regularly every Sunday, which were attended by all the prisoners, who gave good attention, and seemed to appreciate their importance and to profit morally from the lessons inculcated. If the Christian people were more fully awake to the importance of continuing their efforts with this class after their discharge, and were to extend their operations by rendering them practical aid, through kindness and friendly advice, and assist them to obtain proper employment, a still greater benefit might be accomplished.

The prisoners have been supplied with wholesome and nutritious food in abundance, which has been carefully inspected by an officer before being served, thus leaving no room for any reasonable complaint on account of the quantity or quality of the rations. I believe the food issued in this prison to be equal in all respects to that of any similar institution in the country.

In regard to clothing, the rule has been to issue to such prisoners only as were destitute and had no means of procuring clothing for themselves. It is often difficult to determine just how far it is well to go in the matter of issuing clothing in a prison like this, where no remunerative labor is performed or required, in order to avoid inducements to the idle and profligate to get here.

A large portion of the prisoners are old offenders, whose faces have become familiar to the guards by reason of their having been repeatedly sentenced to the jail for misdemeanors, whose time during the year is spent partly in serving out sentences in jail and the remainder in vicious habits outside, thus rotating between the jail and their haunts of vice. When out they seldom labor or follow any useful employment, although they are generally strong and robust. Having but little pride of reputation, they would naturally feel that they would be the gainers if they were sent to jail occasionally to serve out a short sentence there, to be well fed and made comfortable, and each time to be furnished with a new suit of clothes. Such persons really have no claims upon the Government for clothing, yet this class of prisoners are always the most earnest in their demands for clothing, and loudest with their complaints if it is not speedily furnished. They often resort to manifold devices to procure it, and frequently deceive visiting officers of the Government and members of the grand jury in regard to their merits and necessities. To guard against deception from such evil practices, the deputy warden is specially charged, with the assistance of the guards, to examine and report from day to day such cases as are destitute and without means or friends to aid them, and they are supplied with clothing, so far as necessary to prevent suffering and to answer the ends of common decency. To do more, in my judgment, would be to encourage idleness and vice and lose sight of the purposes for which jails and prisons are established.

One of the serious obstacles in the way of the discipline and moral improvement of prisoners in this jail is the unavoidable necessity of herding them together in the corridors and rooms, where they pass their time in idleness, and where the vicious and confirmed criminals exert

a baneful influence upon those less advanced in the career of crime. There are no facilities in the building now in use for putting the prisoners at work, or conducting any business whereby their labor could be made profitable, and, indeed, if such facilities did exist, there is no law in force in this District to authorize the working of prisoners in jail.

In view of the early completion of the new jail-building, where there will be ample room for separating and classifying the prisoners, and excellent accommodations for placing them at some remunerative labor, I deem it of paramount importance that provisions be made by law to authorize the courts to sentence all prisoners to labor, who shall be tried and convicted, and whose term of imprisonment shall exceed ten days. Such is the law which prevails in other large cities, and I can see no good reason why it should not be enacted for this District. Prisoners then could be required to work within the jail or upon the premises at some kind of labor which could be made profitable, and thus in a great measure recompense the Government for the cost of their sustenance during the term of their imprisonment; thus, also, they would be kept from idleness and licentious practices which brood among prisoners when they have no other employment to occupy their time and divert their minds.

Hard labor in jail would also lessen its attractions to a certain class of offenders, and they would be more cautious about getting here. This would be likely to check the large increase to the numbers in jail which has been shown from year to year, and deter many from indulging in petty crimes, and cause them to seek some honorable employment. I believe if such a law were to be enacted and judiciously carried into practice, and also if provision were to be made for imprisoning here all such as are now sent to the penitentiary at Albany, N. Y., a sufficient income could be derived from the prison labor to defray all the expenses of the institution. A great moral reformation among the prisoners would also be secured, as it would afford greater facilities for reclaiming them and inspiring them with habits of industry, and lessen their opportunities for evil practices.

Your attention is respectfully directed to the report of the physician to the jail, hereto annexed, which contains a concise statement of the sanitary condition of the jail during the year.

The law requires the warden to transport to the penitentiary at Albany, N. Y., such prisoners as are convicted of penitentiary offenses and sentenced thereto, and to send to the Reform-School in the District of Columbia all who are sentenced by the courts to that institution. Therefore, the expenses incidental to such transportation are herein included, and amount to \$1,501.54.

The annual salaries of physician, guards, and employés were \$23,508.57

The expenditures on account of the jail during the year are as follows .

Subsistence of prisoners.....	\$11,814 53
Medicines and delicacies for the sick.....	276 10
Lime and disinfectants.....	267 06
Beds, bedding, and clothing.....	2,874 87
Fuel, lights, painting, glazing, gas-fitting, and sewerage.....	2,541 84
Stationery, blanks, and blank-books.....	156 43
Furniture, stoves, hard, tin, and wooden ware, night-tubs, and cell-buckets.....	725 19
Repairs, and expense of execution.....	511 77
Horse keeping, shoeing, repairs on wagon and harness, ice, and miscellaneous articles.....	676 43

The daily average number of prisoners confined in jail during the year was 161.

The highest number in jail at one time was 221.

The lowest number in jail at one time was 116.

Total number in jail during the year was 1,928.

	Male.	Female.
There were in jail at the beginning of the year.....	104	14
Committed during the year.....	1, 639	171
Total commitments, 1,810.		
There remained in jail at the close of the year.....	144	14
Sent to the penitentiary at Albany, N. Y.....	48	2
Sent to the Reform-School in the District of Columbia.....	42	0
Executed.....	1	0
Died.....	0	1
Pardoned by the President.....	12	0
Released during the year.....	1, 496	17

Prisoners received during the year were committed for offenses as follows:

	Male.	Female.
Murder.....	5	2
Arson.....	5	1
Rape.....	10	0
Burglary.....	32	0
Highway robbery.....	44	0
Bigamy.....	2	0
Forgery.....	10	0
Grand larceny.....	69	11
Petit larceny.....	691	61
Affray.....	35	0
Assault and battery with intent to kill.....	28	0
Horse-stealing.....	9	0
Embezzlement.....	5	0
Being incorrigible boy.....	10	0
Abortion.....	1	2
Obtaining goods under false pretenses.....	35	1
Vagrancy.....	10	0
Assault and resisting metropolitan police officers.....	53	1
Receiving stolen goods.....	4	0
Assault and battery.....	477	44
Assault.....	41	2
Stealing dead bodies.....	4	1
Cruelty to animals.....	1	0
Passing counterfeit money.....	1	0
Being the father of illegitimate child.....	2	0
Fugitive from justice.....	1	0
Robbing internal revenue.....	4	0
Malicious mischief.....	3	0
Malicious trespass.....	26	0
Threats of personal violence.....	58	0
Keeping disorderly house.....	2	0
Keeping bawdy-house.....	1	11
Contempt of court.....	8	4
Bench-warrant.....	25	0
Unlawfully carrying on bar-room.....	5	0
Unlawfully engaged as commercial agent.....	3	0
Exposing for sale unwholesome meat.....	1	0
Escape from Reform-School.....	3	0
Indecent exposure.....	1	0
United States witnesses.....	4	0

Of those who were committed to jail as above stated, 1,134 were tried, convicted, and sentenced for crimes, which are classified as follows:

	Male.	Female.
Manslaughter.....	5	0
Arson.....	4	0
Burglary and larceny.....	7	0
Robbery.....	4	0
Forgery.....	4	0
Grand larceny.....	19	0
Assault and robbery.....	2	0
Assault with intent to kill.....	3	0
Obtaining goods under false pretense.....	1	0

	Males.	Females.
Horse-stealing .....	1	0
Resisting metropolitan police officers .....	32	2
Receiving stolen goods .....	5	0
Affray .....	38	7
Assault and battery .....	391	43
Petit larceny .....	365	72
Assault .....	2	2
Threats of personal violence .....	50	10
Malicious trespass .....	20	2
Contempt of court .....	3	2
Unlawfully carrying on bar-room .....	1	1
Removing dead bodies .....	1	0
Keeping bawdy-house .....	1	10
Unlawfully engaged as commercial agent .....	2	0
Indecent exposure .....	1	0
Exposing for sale unwholesome meat .....	1	0
Vagrancy .....	7	0
Idle and incorrigible boys .....	11	0

Very respectfully, your obedient servant,

JOHN S. CROCKER, *Warden.*

Hon. GEORGE H. WILLIAMS,  
*Attorney-General United States.*

HOSPITAL DEPARTMENT UNITED STATES JAIL, D. C.,  
*Washington, November 1, 1874.*

SIR: I have the satisfaction to report but one death during the past year, a case of embolism. Death occurred in a very short time, preceded by no symptoms or indication of disease, and no history could be obtained of her previous life to enable us to trace this result to an originating cause. Upon autopsy a clot of lymph, evidently not recent, was discovered in the right ventricle, part of which becoming detached, or a similar plug finding its way into the pulmonary arteries, causing death.

No epidemic has visited us this year, and we have been remarkably free from malarial disease, a few cases only occurring in those who had been exposed before entering the prison, and none amongst those who had been confined for some time. This exemption, while cases were occurring in various parts of the city, is fairly attributable to the locality of the jail, being unexposed to such exciting causes.

The usual number of diseases incident to the filthy habits and dissolute lives of the prisoners before entering have occurred, with, perhaps, an increase in venereal cases.

In cases of alcoholism and opium-eating, I have persevered in my usual treatment of immediate withdrawal of the poisonous agents, confining the use of alcohol to conditions of collapse. Few drugs are used, and reliance had mainly upon the bromide of potassium as a sedative, perfect quiet, and the introduction of nutritious food, with such means as insure elimination of the poison by the different excretories. One prisoner who had been in the habit of using morphia to the extent of 12 grains daily, equivalent to 4½ ounces of laudanum, was subjected to the treatment, with the happiest results. In all cases they are restored in a few days to convalescence.

Frequent examinations have satisfied me of the abundance and good quality of the food and the sufficiency of bed-clothing furnished the prisoners.

Lime has been abundantly used as a wash, and a free use made of disinfectants. These, together with an abundant use of water and the prompt removal of all offal, have preserved perfect cleanliness throughout the prison. Our exemption from serious diseases, the usual consequence of overcrowding of human beings, is fairly attributable to these sanitary measures.

It gives me great pleasure to commend the vigilance and care of the guards in the performance of their duties to the sick. Every case of disease occurring has been promptly reported to me, and my orders faithfully carried out.

With great respect, I am your obedient servant,

N. YOUNG,  
*Physician United States Jail, D. C.*

General JOHN S. CROCKER,  
*Warden United States Jail, D. C.*



---

---

**REFORM-SCHOOL OF THE DISTRICT OF COLUMBIA.**

---

---





R E P O R T  
OF  
THE BOARD OF TRUSTEES OF THE REFORM-SCHOOL OF THE  
DISTRICT OF COLUMBIA.

---

WASHINGTON, *November 4, 1874.*

SIR: I have the honor to present my fifth annual report as president of the board of trustees of the Reform-School.

At the date of my last report, November 3, 1873, the buildings for which Congress had made a liberal appropriation were uncompleted. They are now finished; gas has been introduced; and the buildings are heated, when required to be, by hot water. As this mode of heating is found to be expensive, the board and Architect of the Capitol deemed it advisable to provide many of the rooms with grates for burning coal, by which they can be sufficiently warmed in mild weather, and especially when only a few rooms are to be used, with much less fuel than would be consumed by heating them with hot water.

The old dwelling-house, no longer needed as such, has been removed to the rear of the main building, and converted into a bakery and laundry.

We cannot boast of the amount of crops raised upon the farm or in the garden. The land is poor, the soil hard to till, and has been suffered to run down for want of proper cultivation and manuring, none of it being suitable for gardening. It will require several years of judicious management to get the ground into a condition to produce satisfactory crops. On this account and the want of water, without the constant use of a steam-pump, the location of the school on its present site was a most unfortunate mistake; but it is too late to rectify it, and we must now do the best we can with it; but time and money are both required to effect what we desire. The best we can do with the farm is to put the most of it in fruit and grass, reserving a portion for garden-purposes and for such vegetables as are required for daily consumption.

The grounds around the buildings have been partially laid out, and a quantity of fruit and ornamental trees ordered, which will be set out this fall and in the spring.

THE SCHOOL.

At the date of my last annual report there were in the school one hundred and thirteen boys; there are now one hundred and fifty-one; more, indeed, than we have accommodations for; and we have been obliged to give notice to the police court that no more must be sent by that court until further orders. Had we room for them, I do not doubt we should now have from two hundred to two hundred and fifty. Many

applications have been made to me to send boys to the institution, whom the parent or parents were unable to control, who are roaming about the streets and growing up in idleness; but in most cases I have been unable to comply with the wishes of the parent for want of room.

The condition of the school is highly satisfactory. The progress of the boys in their studies is very gratifying; they perform their labor on the farm, in the garden, and workshop with great cheerfulness; play during play-time with spirit, and appear to enjoy themselves. How great the contrast of this mode of life, where the boys' minds are constantly employed, from that from which they have been taken—wandering the streets out at late hours with bad company, perhaps now and then pilfering; at any rate, growing up in idleness and vice, candidates for penitentiaries and State prisons.

The boys are divided into two sections; one goes into the school-room in the forepart of the day, and the other upon the farm or garden or into the workshop. In the afternoon they reverse employments. Thus they work half the day and attend to their studies the other half. A Sunday-school is held on Sunday, and a religious discourse is made to them, usually by some person from the city visiting the school for that purpose. These addresses, intended to be adapted to the comprehension of the boys, are of a moral and religious character. The principles and precepts of the Christian religion and morals are taught, but especial care is taken not to give them any sectarian bias. The great object is to infuse into the minds of the boys right principles, moral and religious: to give them just ideas of right and wrong; of their duty to God and their duty to man; of right notions of labor and its necessity; in short, to prepare them for the duties of life. That this can be done with a large majority of this class of boys, our own limited experience and the greater experience of older and similar institutions furnish convincing proof. Allowing somewhat for hereditary qualities, boys are made what they are by the circumstances surrounding them, and the treatment they receive from their parents or those having or assuming authority over them. Example is everything with them; precept, without it, nothing. Hence the importance of removing them from the haunts of vice, the company of the depraved, and from bad examples, to an atmosphere of moral purity, where they see none but good examples.

To accomplish the purpose here indicated for the class of boys referred to, residing in this District, but more especially the city of Washington, was the great and benevolent purpose of those who were the founders and those who have labored to establish this institution; and it is a high source of satisfaction to them, as well as to others, that it is now firmly established and liberally sustained by Congress.

I cannot doubt that in years to come many a one rescued from vice and crime in his boyhood, by becoming an inmate of this institution, will devoutly thank God that he found a refuge from these and his evil companions in the Reform-School.

Those who visit the institution find it surrounded by no high walls. The grounds are inclosed by the same fence which has been in existence for many years—a common post-and-rail fence, five or six feet high. In the fields thus inclosed they may see fifty or sixty boys busily at work hoeing corn or potatoes or gathering the crops, all cheerful and happy. Why do they not escape? Only their teachers or the farmer or the gardener is with them, and how easy it would be for them to disperse and run. The reason they do not is they have no desire. There may be a few among them who would be glad to escape, but they know that if they were to attempt to do so the others would arrest their flight.

The best sentinels are the boys themselves. The secret of all this is, the boys are more happy, and of course contented, at the school than they have been outside of it, and they are not unconscious of the benefit they are deriving from being in the institution. Occasionally, however, boys escape, but are soon recovered and brought back, sometimes returning voluntarily. Let any one visit the school on Sunday, and note the countenances and behavior of the boys during the religious exercises. A brighter collection of faces can scarcely be seen anywhere, and nowhere a more orderly and attentive audience. Many of them, when first sent to the school have countenances more or less morose, surly, and expressive of malignity, revenge, and other brutal passions. But these countenances, it is observed, soon begin to change and assume a more pleasant expression, and in most cases the malicious expression in a few months wholly disappears. Thus is seen in the mirror of the face the change that is going on in the heart and mind of the neophyte.

As a general rule, these boys, not innately bad, had become disobedient, idle, and incorrigible, from bad government or none at all, and from being surrounded by evil influences and examples; the bane of our country, and especially our cities, being the entire want of parental government and wholesome parental influence. Removed from their vicious companions, and from an impure to a healthy moral atmosphere, and kept employed either in the school or in the field, and, moreover, being well clothed, lodged, and fed, they soon show the effect of these moral and physical influences and their religious teachings. Thus they are rescued from vice and degradation, and made worthy citizens.

#### SIMILAR SCHOOLS ELSEWHERE.

In my last report I gave a pretty full account of the reform-schools at Ruyssede, in Belgium, and Mettray, in France, the latter of which is the model we endeavor to follow.

These schools have become renowned for their great success in reforming juvenile offenders without turning keys upon them or exercising other than parental authority. They have demonstrated that *kindness* is a more effective means of reforming boys than *punishment*. No boy can be reformed without winning his confidence, and that cannot be won by harsh treatment or force. It is the gentle south wind and the penetrating beams of the sun that induce a man to doff his overcoat, while the fierce northern blast which endeavors to rudely tear it from him only makes him wrap it more closely around him.

Within a comparatively few years schools of this kind have been established in a considerable number of States, and have proved by the results flowing from them to be among the most valuable and useful of all our benevolent institutions.

#### MECHANICAL TRADES.

In the European reform-schools a great variety of mechanical trades are carried on, besides teaching the boys agriculture, horticulture, fruit-raising, &c., and such is the case in most, if not all, the reform-schools in the United States; but in regard to this I may repeat the language of my last report:

For want of room for workshops we have been able, until quite recently, to employ but a few boys in mechanical work. There are now about thirty, mostly very small boys, employed in cane-bottoming chairs, and ten in tailors' shops making clothes for the inmates. We shall soon introduce other mechanical industries, on which the boys will

be employed during the winter. It is the intent of the board to have as many different kinds of mechanical business taught and carried on as possible. Most unfortunately for the country, but few boys who would learn trades can do so, for the reason that the trades-unions unwisely and tyrannically limit the number of apprentices which a master-workman may take. Every boy not born to a fortune should acquire some profession, trade, or employment on which he may depend for his own and the support of a family. But in this boasted "land of liberty" there are thousands of boys who would gladly learn some trade who cannot because they find the doors of mechanical shops barred against them; and so they must grow up in idleness or seek such adventurous employment as they can find; perchance take Mr. Greeley's advice and "go West." We desire that every boy who leaves the institution shall be prepared to perform useful and skilled labor, and thus to feel and be a useful member of society.

A variety of mechanical employments might be carried on profitably at our institution, especially during the season when out-door work ceases; but as yet we have not, for want of means and other reasons, been able to establish them. We hope, however, by the favor of Congress, soon to be able to do this. We have asked for an appropriation to enable us to erect a building for workshops, and to purchase a steam-engine as a motive power, belting, machinery, &c. I call attention to the fact, stated by the superintendent, that up to the first of July of this year the boys had earned in a little more than six months \$1,233.90 by caning chairs, done chiefly by the very small boys; but since then, owing to the general depressed condition of business, we have not been able to obtain any work of this kind. It is easy to see what they might have earned had we been able to obtain work for them.

#### ANOTHER FAMILY BUILDING NECESSARY.

I have stated that we have a greater number of boys in the institution now than we can properly accommodate; and, if we are to receive into the school all such as are sent to it by the criminal and police courts, and such incorrigible boys as parents cannot control, or those who are leading a life of idleness and vagabondage, we must have "more room;" that is, one or two more family buildings. A bill is now before the House of Representatives, reported favorably by the Committee on the District of Columbia, which provides for the commitment to this institution, by the direction of the Attorney-General, of such juvenile offenders as have been convicted of crimes against the United States, and as may better be detained here than elsewhere. Should this bill become a law, which is quite probable, two additional family buildings will become indispensably necessary.

#### MORE LAND NEEDED.

By the direction of the board of trustees, I have asked for an appropriation to purchase the remainder of the Dodge farm, consisting of about 120 acres. For various reasons, it is quite important that this should be acquired. It lies between the Reform-School farm and the Eastern Branch, to which access for the institution is desirable. It is a harbor for most objectionable neighbors, who prowl about our premises at night; and as the number of inmates in the school is likely to be greatly increased with the increase of population in the District, more land for cultivation and the support of stock will be indispensable. The present is deemed a favorable moment to make this desirable acquisition.

#### ORIGIN OF THE SCHOOL.

Like most other humane and benevolent institutions, the Reform-School had its origin in the efforts of a few gentlemen animated by a de-

sire to benefit an important class of society. The streets of our city were infested, as the streets of all our cities are more or less, by un-governed and evil-disposed boys. To send them for petty crimes and misdemeanors to jail, was to send them where they would perfect themselves in crime by associating with old and hardened offenders. Better, in most cases, to turn the boy, when arrested and brought before the judge, into the street unpunished. And so it was done. A remedy for the evil was needed and found. Several years' labor, however, have been required to establish the school; and even after it was opened, more than once it came near failing for lack of the necessary means for its support. Fortunately these were obtained, and now we have the high satisfaction of knowing that it is at length permanently estab-lished and doing great good. The board of trustees feel assured that, under the judicious management of the superintendent, Mr. Howe, and with the generous aid it has received from Congress, it will compare favorably with any similar institution in the United States. Our ambi-tion is that it shall become a model institution.

I have great pleasure in referring you to the accompanying reports of the superintendent and physician—to the former for valuable statistics and observations, and to the latter for the sanitary condition of the institution.

I have the honor to be, your obedient servant,

N. SARGENT,

*President of the Board of Trustees of the Reform-School.*

Hon. GEO. H. WILLIAMS,

*Attorney-General.*

REPORT OF THE SUPERINTENDENT.

*To the Honorable Board of Trustees of the Reform-School of the District of Columbia :*

GENTLEMEN: It has pleased a kind Providence to permit me to pre-sent to you my fifth annual report, which you will find in a condensed form in the following tables and statements :

TABLE No. 1.—*Showing the number received and discharged, and the general state of the institution, for the year ending November 1, 1874.*

Number of boys remaining in the institution November 1, 1873 .....	113
Number received during the year .....	67
Whole number that have been in the institution during the year .....	180
Number discharged.....	27
Number escaped.....	2
Number remaining November 1, 1874 .....	151

TABLE No. 2.—*Showing the ages of those admitted.*

Age.	No	Age.	No.
Eight .....	2	Fourteen .....	15
Nine .....	2	Fifteen .....	19
Ten .....	3	Sixteen.....	2
Eleven .....	6	Eighteen .....	2
Twelve .....	4		
Thirteen .....	12	Total.....	67

TABLE No. 3.—*Showing the birthplace of those admitted.*

Birthplace.	No.	Birthplace.	No.
District of Columbia.....	36	Pennsylvania.....	1
Maryland.....	11	England.....	1
Virginia.....	16		
Ohio.....	1	Total.....	67

TABLE No. 4.—*Showing parentage of those admitted.*

Nationality.	No.	Nationality.	No.
American, white.....	9	German.....	1
American, colored.....	30	Italian.....	1
English.....	6		
Irish.....	16	Total.....	67

TABLE No. 5.—*Showing committals each month.*

Month.	No.	Month.	No.
November.....	5	June.....	1
December.....	10	July.....	1
January.....	1	August.....	1
February.....	5	September.....	1
March.....	9	October.....	1
April.....	8		
May.....	3	Total.....	67

TABLE No. 6.—*Showing cause of commitment.*

Cause.	No.	Cause.	No.
Incorrigible.....	37	Petit larceny.....	1
Vagrancy.....	7	Grand larceny.....	1
Assault and battery.....	2		
Forgery.....	2	Total.....	67

TABLE No. 7.—*Showing source from which those admitted were received.*

Police court.....	1
President of the board of trustees.....	1

TABLE No. 8.—*Showing the moral and social condition of the inmates on entering the institution.*

Number who came under assumed names.....	1
Number who had used tobacco.....	1
Number who had used profane language.....	1
Number who had used intoxicating liquors.....	1
Number who had been guilty of larceny.....	1
Number who had lost both parents.....	1
Number who had lost father.....	1
Number who had lost mother.....	1
Number whose parents are both living.....	1



TABLE NO. 9.—*Classified statement of expenditures for the reform-school for the year ending November 1, 1874.*

For salaries and wages .....	\$6,509 43
For support.....	6,203 04
For fuel.....	3,307 01
For clothing and bedding.....	2,939 55
For hardware, china-ware, &c.....	266 03
For blacksmithing and repairing.....	156 33
For agricultural implements and seeds .....	217 87
For books and stationery .....	129 81
For incidental expenses.....	399 57
For medical attendance and medicines .....	203 98
For sewing-machine, needles, &c.....	84 78
For plumbing, glass, and paints.....	90 59
For furniture and carpets.....	4,906 24
For horses and harness .....	350 00
Cash paid over to G. B. McCartee .....	714 30
Total .....	26,478 53

TABLE NO. 10.—*Detailed statement of the expenditures for the reform-school for the year ending November 1, 1874.*

Date.	To whom paid.	On what account.	Amount.
1873.			
Nov ....	Grunnebaum & Co.....	Boys' caps .....	\$57 75
	R. Brooke & Son .....	Boys' shoes .....	224 00
	N. W. Barrow .....	Coal.....	561 59
	William R. Riley .....	Cloth.....	645 69
	F. W. Howe .....	Salary.....	125 00
	S. C. Mullin .....	do.....	62 50
	C. H. Johnston .....	do.....	62 50
	Lottie A. Howe.....	do.....	50 00
	D. C. Mosher .....	do.....	50 00
	B. C. Maris .....	do.....	50 00
	Thomas Mitchell.....	do.....	50 00
	Perry Jones .....	Wages.....	14 00
	Mary Karns.....	do.....	15 00
	Charlotte Tracy.....	do.....	12 00
	Alice Nichols .....	do.....	12 00
	Mary O'Riley .....	do.....	12 00
	Sarah Wilding.....	do.....	12 00
I Dec ....	J. C. Wiswall.....	Woolen sacks.....	28 50
	William R. Riley .....	Dry goods .....	191 53
	Thomas H. Joy .....	Beef.....	207 12
	E. G. Davis.....	Sundries.....	7 85
	George Nero.....	Labor .....	1 25
	F. W. Howe.....	Incidental expenses.....	8 06
	Baltimore and Ohio Railroad Co.	Freight.....	8 02
	N. W. Burchell .....	Groceries .....	205 83
	William Sollers.....	Bread .....	373 18
	Hall & Hume.....	Provisions .....	439 62
	C. Muller & Son.....	Confectioneries .....	11 69
	N. W. Barrow.....	Ice .....	5 08
	L. H. Carlton .....	Hay .....	26 00
	Benjamin Spilliards.....	Oysters.....	6 00
	J. H. Baker.....	Sundries.....	15 12
	Webb & Beveridge .....	Crockery .....	20 15
	G. W. Cadwallader.....	Reward .....	100 00
	T. R. Hackett.....	Boarding-house .....	4 00
	William F. Lee .....	Advertising.....	5 00
	Western Union Telegraph Co...	Telegraphing .....	2 82
	Washington post-office.....	Box-rent.....	1 57
	Baltimore and Ohio Railroad Co.	Freight.....	3 10
	F. W. Howe.....	Expenses pursuing horses.....	15 95

TABLE No. 10.—*Detailed statement of the expenditures, &c.*—Continued.

Date.	To whom paid.	On what account.	Amount.
1874. Dec .....	D. C. Mosher .....	Expenses pursuing horses.....	\$23 64
	B. C. Maris .....	do.....	15 4
	Louxman & Long.....	Blacksmithing .....	20 70
	F. W. Howe.....	Salary.....	125 0
	S. C. Mullin .....	do.....	62 5
	C. H. Johnston .....	do.....	62 5
	L. A. Howe.....	do.....	50 0
	D. C. Mosher .....	do.....	50 0
	B. C. Maris .....	do.....	50 0
	Thomas Mitchell.....	do.....	50 0
	Perry Jones.....	do.....	14 0
	Mary Karns .....	Wages.....	15 0
	Charlotte Tracy.....	do.....	12 0
	Alice Nichols .....	do.....	9 0
	Sarah Wilding.....	do.....	12 0
	Mary Selvey.....	do.....	12 0
	R. A. Mosher .....	do.....	2 4
1874. Jan .....	R. Brooke & Son.....	Boys' shoes .....	102 2
	J. E. Johnson.....	Repairing shoes.....	45 7
	W. R. Riley .....	Dry goods .....	91 5
	Lewis Baar.....	Sewing-machine .....	60 0
	Jacob Gurinder .....	Chair-needles .....	48 7
	Hamilton & Pearson.....	Gas-pipe.....	1 0
	Andrew Joyce .....	Repairing buggy.....	2 7
	G. W. McElfresh.....	Arresting boy.....	6 0
	D. C. Mosher .....	Fugitive expenses .....	1 5
	J. A. McDevitt .....	Expenses .....	10 0
	F. W. Howe.....	Incidental .....	4 0
	do.....	Salary.....	125 0
	S. C. Mullin .....	do.....	62 5
	C. H. Johnston.....	do.....	62 5
	L. A. Howe.....	do.....	50 0
	D. C. Mosher .....	do.....	50 0
	B. C. Maris .....	do.....	50 0
	Thomas Mitchell.....	do.....	50 0
	Perry Jones .....	do.....	14 0
	Mary Karns .....	do.....	15 0
	Charlotte Tracy .....	Wages.....	12 0
	Alice Nichols .....	do.....	12 0
	Sarah Wilding.....	do.....	12 0
	Mary Selvey .....	do.....	12 0
Feb .....	J. E. Johnson .....	Repairing shoes .....	4 0
	Thomas Keech.....	Medical attendance .....	5 0
	William R. Riley.....	Dry goods .....	7 0
	N. W. Barrow .....	Coal.....	20 0
	R. Brooke & Son.....	Shoes.....	10 0
	J. E. Johnson .....	Repairing shoes.....	10 0
	Robert Ball.....	Shoe-strings .....	5 0
	J. S. Killmon .....	Coal.....	5 0
	T. J. Edwards .....	Plumbing .....	5 0
	F. W. Howe.....	Incidental expenses.....	5 0
	Baltimore and Ohio Railroad Co.	Freight.....	5 0
	F. W. Howe .....	Salary.....	125 0
	S. C. Mullin.....	do.....	62 5
	C. H. Johnston.....	do.....	62 5
	L. A. Howe .....	do.....	50 0
	D. C. Mosher .....	do.....	50 0
	B. C. Maris .....	do.....	50 0
	Thomas Mitchell.....	do.....	50 0
	Perry Jones .....	Wages .....	14 0
	Mary Karns .....	do.....	15 0
	Charlotte Tracy.....	do.....	12 0

TABLE No. 10.—*Detailed statement of the expenditures, &c.*—Continued.

Date.	To whom paid.	On what account.	Amount.
1874.			
Feb ....	Alice Nichols .....	Wages .....	\$12 00
	Sarah Wilding .....	do .....	12 00
	Mary Selvey .....	do .....	9 20
	E. F. Simpson .....	Repairing stoves .....	15 90
	William Sollers .....	Bread .....	464 40
	Lanxman & Long .....	Blacksmithing .....	42 24
	Thomas H. Joy .....	Beef .....	229 65
	Webb & Beveridge .....	China-ware .....	51 15
	Charles Stott & Co .....	Medicines .....	32 90
	George Ryneal .....	Glass .....	8 20
	National Bank of the Republic .....	Check-book .....	2 50
	J. A. Baker .....	Sundries .....	45 05
	William Ballantyne .....	Books .....	42 89
	K. Kneesi .....	Repairing harness .....	25 00
March...	Thomas H. Joy .....	Beef .....	126 00
	Robert Clark .....	Hay .....	29 75
	H. S. Carlton .....	do .....	32 25
	L. H. Schneider .....	Hardware .....	6 02
	J. E. Carpenter .....	Stationery .....	5 00
	T. J. Price .....	Carriage-hire .....	15 00
	F. W. Howe .....	Incidental expenses .....	3 10
	Royal Tyler .....	Medical attendance .....	5 00
	F. W. Howe .....	Salary .....	125 00
	S. C. Mullin .....	do .....	62 50
	C. H. Johnston .....	do .....	62 50
	L. A. Howe .....	do .....	50 00
	D. C. Mosher .....	do .....	50 00
	B. C. Maris .....	do .....	50 00
	Thomas Mitchell .....	do .....	50 00
	George Mackwell .....	do .....	14 00
	Mary Karns .....	do .....	15 00
	Alice Nichols .....	do .....	12 00
	Mary Joseph .....	do .....	12 00
	Sarah Ashton .....	do .....	12 00
	Delia Mathews .....	do .....	12 00
April...	Thomas H. Joy .....	Beef .....	108 00
	J. S. Killmon .....	Coal .....	200 00
	Washington post-office .....	Box-rent .....	1 57
	T. J. Price .....	Carriage-hire .....	15 00
	Baltimore and Ohio Railroad Co. .....	Freight .....	12 57
	F. W. Howe .....	Incidental .....	3 74
	M. H. Prince .....	Shears .....	1 00
	G. W. Coldenstrath .....	Cabbages .....	12 00
	F. W. Howe .....	Salary .....	125 00
	S. C. Mullin .....	do .....	62 50
	C. H. Johnston .....	do .....	62 50
	Lottie A. Howe .....	do .....	50 00
	D. C. Mosher .....	do .....	50 00
	B. C. Maris .....	do .....	50 00
	Thomas Mitchell .....	do .....	50 00
	George Mackwell .....	do .....	14 00
	Mary Karns .....	do .....	15 00
	Alice Nichols .....	do .....	12 00
	Mary Joseph .....	do .....	12 00
	Sarah Ashton .....	do .....	12 00
	Delia Mathews .....	do .....	12 00
May ...	Thomas H. Jay .....	Beef .....	117 00
	H. L. Carlton .....	Hay .....	29 87
	W. H. Marshall .....	Thienes .....	2 90
	R. Austrian & Co .....	Boys' caps .....	66 00
	F. W. Howe .....	Salary .....	125 00
	S. C. Mullin .....	do .....	62 50
	C. H. Johnston .....	do .....	62 50

TABLE No. 10.—*Detailed statement of the expenditures—Continued.*

Date.	To whom paid.	On what account.	Amount.
1874.			
May ....	L. A. Howe .....	Salary .....	\$50 00
	D. C. Mosher .....	do .....	50 00
	F. Westby .....	do .....	38 7
	C. M. McKinley .....	do .....	50 00
	George Mackwell .....	Wages .....	14 00
	Elvira Westby .....	do .....	7 50
	Mary Karns .....	do .....	7 50
	Alice Nichols .....	do .....	12 00
	Sarah Ashton .....	do .....	12 00
	Mary Joseph .....	do .....	12 00
	Delia Mathews .....	do .....	12 00
	Thomas Keech .....	Medical attendance .....	16 50
	Grafton Tyler .....	do .....	10 00
	J. E. Carpenter .....	do .....	25 00
	Charles Stott & Co. ....	Medicines .....	39 00
	J. S. Killmon .....	Coal .....	133 42
June ....	Thomas H. Joy .....	Beef .....	276 10
	Baltimore and Ohio Railroad Co.	Freight .....	7 1
	F. W. Howe .....	Incidental expenses .....	4 14
	E. G. Davis .....	Machine-oil .....	6
	Thomas H. Joy .....	Strawberries .....	1 50
	F. W. Howe .....	Salary .....	125 00
	S. C. Mullin .....	do .....	62 50
	C. H. Johnston .....	do .....	62 50
	L. R. Howe .....	do .....	50 00
	D. C. Mosher .....	do .....	50 00
	F. Westby .....	do .....	50 00
	C. M. McKinley .....	do .....	50 00
	George Mackwell .....	do .....	14
	Elvira Westby .....	do .....	15 00
	Alice Nichols .....	do .....	12 00
	Sarah Ashton .....	do .....	12 00
	Mary Joseph .....	do .....	12 00
	Delia Mathews .....	do .....	6 00
	Mary Hausell .....	do .....	6 00
July ...	Washington post-office .....	Box-rent .....	1 50
	Baltimore and Ohio Railroad Co.	Freight .....	6 50
	F. W. Howe .....	Incidental expenses .....	8 50
	Green & Williams .....	Furniture .....	77 50
	William Ballantyne .....	School-desks .....	125 00
	J. E. Johnston .....	Repairing shoes .....	4 50
	F. W. Howe .....	Salary .....	125 00
	S. C. Mullin .....	do .....	62 50
	C. H. Johnston .....	do .....	62 50
	L. A. Howe .....	do .....	50 00
	D. C. Mosher .....	do .....	50 00
	F. Westby .....	do .....	50 00
	C. M. McKinley .....	do .....	50 00
	John Blain .....	do .....	25 00
	George Mackwell .....	do .....	14 00
	Elvira Westby .....	do .....	15 00
	Alice Nichols .....	do .....	12 00
	Mary Joseph .....	do .....	12 00
	Mary Hausell .....	do .....	12 00
	Mary O'Riley .....	do .....	12 00
August .	N. W. Burchell .....	Provisions .....	35 00
	Webb & Beveridge .....	Crockery .....	5 00
	Hall & Hume .....	Provisions .....	24 50
	W. M. Galt .....	Flour .....	62 50
	William Sollers .....	Bread .....	146 50
	George Ryneal .....	Paints .....	14 00
	Thomas H. Joy .....	Beef .....	15 00
	J. A. Baker .....	Garden-seeds .....	1 00

TABLE NO. 10.—*Detailed statement of the expenditures—Continued.*

Date.	To whom paid.	On what account.	Amount.
1874.			
August .	T. J. Edwards .....	Plumbing .....	\$23 45
	L. H. Carlton .....	Mill-feed .....	95 00
	G. W. Coldenstrath .....	Cabbage .....	29 75
	Wheatley Bros. ....	Lumber .....	11 99
	F. W. Howe .....	Incidental .....	4 72
	J. S. Killmon .....	Coal .....	1,546 00
	Petty & Harvey .....	Hats .....	24 00
	Louxman & Long .....	Blacksmithing .....	69 02
	William R. Riley .....	Dry goods .....	437 70
	F. W. Howe .....	Salary .....	125 00
	S. C. Mullin .....	do .....	62 50
	C. H. Johnston .....	do .....	62 50
	L. A. Howe .....	do .....	50 00
	D. C. Mosher .....	do .....	50 00
	F. Westby .....	do .....	60 00
	John Blain .....	do .....	50 00
	John Talbert .....	Wages .....	14 00
	Elvira Westby .....	do .....	15 00
	Alice Nichols .....	do .....	12 00
	Mary Hansell .....	do .....	12 00
	Mary O'Riley .....	do .....	12 00
	Mary Joseph .....	do .....	12 00
Sept . . .	Hall & Hume .....	Provisions .....	192 35
	W. M. Galt .....	Flour .....	20 00
	N. W. Burchell .....	Groceries .....	64 39
	William Sollers .....	Bread .....	292 81
	Thomas Joy .....	Beef .....	148 83
	William Ballantyne .....	Books .....	84 42
	H. L. Carlton .....	Mill-feed .....	153 85
	E. G. Davis .....	Repairing sewing-machine .....	13 88
	Lewis Baar .....	do .....	10 90
	F. W. Howe .....	Incidental expenses .....	28 05
	William Sollers .....	Bread .....	279 00
	W. B. Williams .....	Furniture .....	3,656 64
	W. S. Mitchell & Co .....	Carpets .....	345 78
	J. A. Baker .....	Agricultural implements .....	109 37
	Charles Stott & Co .....	Medicines .....	7 90
	Thomas Keech .....	Medical attendance .....	6 00
	T. B. Hood .....	do .....	25 00
	Charles Stott & Co .....	Medicines .....	10 68
	Wall, Robinson & Co .....	Cloth .....	500 00
	William R. Riley .....	Dry goods .....	221 14
	F. W. Howe .....	Salary .....	125 00
	S. C. Mullin .....	do .....	62 50
	C. H. Johnston .....	do .....	62 50
	L. A. Howe .....	do .....	50 00
	D. C. Mosher .....	do .....	62 50
	F. Westby .....	do .....	60 00
	John Blain .....	do .....	50 00
	John Talbert .....	do .....	50 00
	William Ruth .....	do .....	8 67
	E. Y. Ward .....	do .....	20 83
	Ann E. Ward .....	do .....	3 00
	Elvira Westby .....	do .....	7 50
	Alice Nichols .....	do .....	12 00
	Mary Joseph .....	do .....	12 00
	Mary Hansell .....	do .....	12 00
	Mary O'Riley .....	do .....	12 00
Oct .....	Louxman & Long .....	Blacksmithing .....	24 37
	H. L. Carlton .....	Mill-feed .....	166 00
	L. H. Schneider .....	Hardware .....	6 21
	Hall & Hume .....	Provisions .....	286 02
	N. W. Burchell .....	do .....	95 30

TABLE NO. 10.—Detailed statement of the expenditures—Continued.

Date.	To whom paid.	On what account.	Amount.
1874.			
Oct.....	F. W. Howe.....	Money paid Hopkins & Yales for horses.	\$325 00
	Thomas H. Joy.....	Beef.....	140 47
	E. F. Mudd .....	Tailoring .....	30 00
	F. W. Howe.....	Salary .....	125 00
	S. C. Mullin.....	do.....	62 50
	C. H. Johnston .....	do.....	62 50
	L. A. Howe .....	do.....	50 00
	D. C. Mosher.....	do.....	62 50
	F. Westby .....	do.....	60 00
	John Blain .....	do.....	50 00
	John Talbert .....	do.....	50 00
	Ann E. Ward .....	do.....	15 00
	E. Y. Ward .....	Wages.....	12 50
	Alice Nichols .....	do.....	12 00
	Mary Joseph.....	do.....	12 00
	Mary O'Riley .....	do.....	12 00
	Mary Hansell.....	do.....	12 00
	Total expenditures.....		25,764 23

TABLE NO. 11.—Showing the amount of money received during the year.

Cash on hand November 1, 1873.....	\$274 65
Received from United States Treasury for salaries and wages.....	4,044 70
Received from United States Treasury for general expenses.....	3,649 22
Received from District of Columbia for support of inmates.....	2,356 12
Received for cane-seating chairs.....	1,283 50
Received for board.....	400 00
Received for income from stock.....	27 00
Received for rags.....	25 00
Received for grease.....	3 00
Received of George B. McCartee for salaries and wages.....	2,307 50
Received of George B. McCartee for general expenses.....	7,108 50
Received of George B. McCartee for improvements.....	109 57
Received of George B. McCartee for medical attendance.....	49 50
Received of George B. McCartee for furniture .....	4,986 24
Total .....	26,472 50

REMARKS.

The labors of another year are passed. When we look back upon those labors among boys disposed to do wrong, boys that were the terror of the communities in which they lived, those who showed by their bad faces the condition of their hearts, boys that were naturally depraved from vicious parentage and cruel neglect, and those that have been spoiled by undue indulgence by kind parents, our hearts are made to rejoice by the acknowledged gratitude of these boys for their improved condition, and for having been snatched from the jaws of pollution and ruin, which were open wide to engulf them. With many of these boys the chain-gang, the jail, filthiness and rags, idleness and shame, have been exchanged for wholesome food, cleanliness, steady habits, industry, good manners, education, and a knowledge of Christianity. These influences upon these unfortunate boys, in connection with the love and deep interest manifested toward them by the officers

and teachers, forgiving their offenses, and meeting their indifferences and stubbornness with kind reprimands and instructions, have gained from them a cheerful obedience to all requirements, and developed a sense of moral principle in them to such a degree in most instances as has won their love and respect for the institution that has saved them. The results of the year's operations cheer and strengthen us, and we are only sorry that the opportunities offered by the Reform-School cannot reach a larger number, for hundreds are perishing for want of restraint and moral teachings such as are furnished by it. Earnest and numerous have been the entreaties for us to receive bad boys, who are beyond the control of their parents, but for want of room we have been able to take but a few compared with the number for whom admission has been sought. We desire to call your attention to the great necessity of providing more room at the earliest possible moment. In our opinion, at least two family buildings should be erected at once.

#### OUR SCHOOLS.

The school for intellectual training has been in session the entire year, devoting four hours and a half each day to study. The advancement made in this department is very gratifying to us. It is true, a majority of these boys on entering the institution are very ignorant, many of them not knowing their letters, and the subject of educating them is one of the first importance with us, although they have been rejected from other schools or have been wandering outcasts of society, without a home to shelter them, or kind friends in whom they could confide, or to whom they might look for protection. Still we find they have active minds, and are capable of making praiseworthy intellectual advancement, and we feel confident our record will compare with other schools of the country.

#### MORAL AND RELIGIOUS CULTURE.

Our efforts in this direction have been crowned with as much success as in any former year. We consider the Word of God the only foundation upon which a true reformation can stand. Great good has been done to the boys, we believe, by the religious and moral exercises of the institution.

#### SANITARY CONDITION.

We are under renewed obligations to our Divine Master for His protecting care, and for giving us health and strength through the past year. For a more explicit statement, I respectfully refer you to the report of Dr. T. B. Hood, the attending physician.

#### THE FARM AND CROPS.

We are sorry not to be able to make a better exhibit of farm-products. Much labor and attention have been given to the farm and garden, but we find our sterile lands will not produce largely under the most thorough cultivation. The dry weather and potato-bugs caused an entire failure of our crops of late potatoes. Our corn also was much injured by the drought. The garden has yielded moderately well, supplying our tables abundantly with vegetables, and we have a supply on hand sufficient for winter use.



SHOPS.

Our chair-shop thus far has proved a success, having furnished work for a class of boys too small to be profitably employed upon the farm. We received \$1,233.93 for labor performed in this shop to July 1, since which time the shop has been closed for want of work. We have now made partial arrangements for all the work we can do, and hope soon to have the shop re-opened. We would earnestly recommend the erection of a suitable shop-building, that not only cane-seating can be profitably carried on, but that other branches of industry may be introduced. Since July the shop force have been employed in grading the lawns, &c., which would have cost the institution at least \$1,000 had it been done by contract.

ACKNOWLEDGMENTS.

We are indebted to the president of the board for many volumes of agricultural books, reports, and publications.

A. B. Gruner, esq., has sent us the Mutes' Chronicle, Ohio Statesman, and Lancaster Gazette for the past year, for which he has our thanks.

We are also under obligations to the editor of the Daily Morning Chronicle for a daily copy of that valuable paper. We also thank the Christian Association of Washington for 130 copies weekly of Our Home Paper. We tender our thanks to the officers and employes of the institution who have so cheerfully aided us, and who have so earnestly labored for the best interests of the school. And again, as in former years, would we express our gratitude to the trustees of the school for the uniform kindness shown us at all times, and for the undivided sympathy and support we have ever received from them in our arduous labors. We would not close without expressing our heartfelt thanks to Him who hath so carefully watched over and kept us from harm, and may our heavenly Father continue to smile upon us and prosper all our efforts for good.

Most respectfully, your obedient servant,

F. W. HOWE,  
Superintendent.

TEACHER'S REPORT.

*To the honorable Board of Trustees of the Reform-School :*

GENTLEMEN: The following report exhibits the condition and operations of the reform-school during the year ending November 1, 1874:

Number of pupils November 1, 1873 .....	113
Number received during the year.....	67
Number discharged during the year .....	27
Number remaining in the school to date.....	153

*Table showing the mental condition of the inmates when received.*

Did not know the alphabet.....	34	Could not write.....	12
Could not read .....	38	Could write legibly .....	21
Could read only .....	39	Could write well.....	21
Could read well .....	21	Ignorant of geography .....	12
Ignorant of arithmetic.....	120	Ignorant of grammar .....	14

Table showing the mental condition of those remaining in the school.

Alphabet .....	4	First lessons in geography.....	14
Spell only .....	16	Mannual of geography .....	45
First reader .....	13	Intermediate geography.....	17
Second reader .....	21	Grammar .....	17
Third reader.....	30	Mental arithmetic .....	86
Fourth reader .....	48	Practical arithmetic.....	76
Fifth reader .....	19	Penmanship .....	114

The advancement of the boys under our care during the past year has been very gratifying to us, not only in their studies but in ther general deportment also. We feel justified in saying that the greater number of boys in the school for the last year have shown a thirst for general knowledge and an indefatigable industry in obtaining it.

We have endeavored to awaken their faculties to their fullest extent, and to inspire them with pure and high principles, and prepare them to lead a useful and honorable life after leaving the iustitution. It is necessary for us to impart to them a zest for accurate attention to all their duties, whether in school, at work, or play, as it will have a tendency to strengthen and discipline their miuds, and to awaken in them a spirit of self-reliance and self-perseverance which will promote their success in after life.

In conclusion, we would express our thanks to our superintendent (to whom we refer in all our trials and successes) for approval and encouragement; also to the honorable board of trustees for words of counsel. Trusting in Him who is the Great Ruler of us all, I respectfully submit this report.

S. C. MULLIN.

GARDENER'S REPORT.

REFORM-SCHOOL, *October 20, 1874.*

*To the Board of Trustees :*

GENTLEMEN: I respectfully submit the following report. I commenced my labors as gardener the 10th of May, too late to raise many early vegetables. The garden-force consists on an average of eighteen boys; one half labor in the morning and the other half in the afternoon. They have generally performed their duties well, have been respectful in demeanor, and prompt in obeying orders. The strict discipline and habits of industry daily inculcated by the superintendent renders my task comparatively an easy one. I am much interested in the welfare of the boys under my charge, and strive to lead them to aspire to become good and respectable members of society.

May God bless this institution to the good of the youth intrusted to its care.

With respect,

FRANCIS WESTBY.

(See accompanying tables for amount of products.)

LIST OF GARDEN-PRODUCTS.

Beets, 16 bushels .....	\$24 00
Cabbage, 590 head .....	47 20
Cucumbers.....	15 00
Carrots .....	2 00
Green corn, 200 dozen .....	24 00

Lettuce .....	\$10 00
Onions, 45 bushels.....	90 00
Potatoes, 195 bushels.....	195 00
Radishes .....	12 00
Spinach.....	5 00
Snap-beans .....	12 00
Sweet potatoes, 58 bushels.....	58 00
Turnips, 200 bushels.....	160 00
Lima beans .....	
Squashes and cymblins.....	
Green pease, 15 bushels.....	
Tomatoes, 80 bushels .....	

FRUITS.

Blackberries, 480 quarts .....	
Strawberries, 40 quarts.....	
Cantaleups, 370.....	
Total .....	\$45 00

LIST OF FARM AND ORCHARD PRODUCTS.

Apples used in kitchen-cider .....	\$20 00
Apples gathered in fall, 21 barrels.....	42 00
Rye, 200 bushels, at 90 cents.....	180 00
Corn, 600 bushels, at 50 cents .....	300 00
Beans, 24 bushels.....	60 00
Hay, 3 tons.....	60 00
Straw, 7 tons.....	150 00
Corn-fodder, 12 tons .....	120 00
Pears, 3 bushels.....	
Broom-corn, ½ ton .....	200 00
Pork, 200 pounds.....	140 00
Cherries, 10 bushels .....	40 00
	1,312 00

REPORT OF THE PHYSICIAN.

WASHINGTON, D. C., October 31, 1874.

*To the President of the Reform-School of the District of Columbia :*

SIR: As the physician of the Reform-School, I have the honor to report that during the short term of my connection with it the health of the inmates has been extraordinarily good. Indeed, the whole number of cases requiring treatment have not exceeded a dozen, and these all of one class of miasmatic origin, intermittent fever, and exclusively of the tertian type. None of these were treated for more than a few days, and all ended in recovery.

Upon the assumption of my duties I immediately proceeded to the inspection of the buildings, including the school-room and dormitories, and to ascertain the quantity and quality of the food supplied to the inmates. The only objection to the site of the building lies in the fact that it is exposed to the miasmata rising from the bed of the Eastern Branch of the Potomac, the estuary of which is seen lying to the southwest. The recession of the tides exposes a large amount of decaying vegetable matter, mingled with a greater or less amount of animal matter during the summer and fall, to the direct heat of the sun. The production of miasmata is inevitable, and these are carried by the prevailing southerly and southeasterly winds to the crown of the hill upon which the buildings are located. I suggest, as an important means of protection, the planting on the southerly side of the hill a number of

forest-trees of large growth. These, after a few years, would afford very great, if not perfect, protection from this source of disease, as experience has demonstrated the power of a body of trees to protect under such circumstances. The dietary of the school, as I saw it in the material upon the tables, leaves little, if anything, to be desired. There is a proper proportion of meats and vegetables representing the nitrogenous and non-nitrogenous foods, possibly an excess of the carbonaceous or fatty elements. The appearance, however, of the inmates, which is certainly very creditable to the management, proves that they are properly and sufficiently fed. I found the cooking also to be perfectly satisfactory. The dormitory in the detached building lying to the north of the main building was carefully inspected. It was clean, the beds and bedding clean, and in every way satisfactory. There is no doubt, however, that it is insufficient for the existing number of inmates, (140,) if proper precautions against disease are to be taken, and particularly during the winter-months, when, in consequence of the cold, the ingress of air will necessarily be reduced to the minimum. In order to the preservation of health, at least 1,000 to 1,200 cubic feet of air should be allowed to each person. In the calculation made, I found that the number which the superintendent, Mr. Howe, was compelled to put in this dormitory would not allow more than 500 to 600 feet to each person. With properly-enforced ventilation, however, for which, I regret to say, the architect has not sufficiently provided, it is scarcely probable that any serious results will ensue.

It cannot be expected that the health of the inmates will remain for the future so entirely good as during the two months of my connection with the school, and I urge the propriety of providing hospital accommodations of all characters for a small number, say, ten or twelve persons, so that when the necessity shall arise all confusion may be obviated. As matters now exist, a case of typhoid fever or a fractured limb could not be properly cared for nor properly isolated from the remainder of the institution. I may add, in conclusion, that I have been most highly pleased with the management of the school. The buildings are kept in good condition—clean and well ventilated, and the inmates well fed, comfortably and properly clad, and by their manners and appearance give evidence of thorough care and wholesome discipline. I regard the school as equally a credit to the trustees and superintendent.

Very respectfully, your obedient servant,

T. B. HOOD, *Physician.*



---

---

# REPORT OF THE BOARD OF METROPOLITAN POLICE.

---

---

H. Ex. 7—5





**THIRTEENTH ANNUAL REPORT**  
**OF THE**  
**BOARD OF METR POLITAN POLICE.**

---

**DEPARTMENT OF METROPOLITAN POLICE,**  
**OFFICE OF THE BOARD,**  
*Washington, D. C., November 16, 1874.*

To the **ATTORNEY-GENERAL** :

**SIR** : In compliance with a provision of the act of Congress approved March 3, 1873, making appropriations for sundry civil expenses of the Government, which requires that their annual report “shall hereafter be made to the Attorney-General of the United States,” the Board of Police of “the Metropolitan Police District of the District of Columbia” respectfully submit their thirteenth annual report of the condition of the police within said district for the year ending September 30, 1874.

**THE FORCE.**

The regular force has not been numerally changed during the past year, and, as at present constituted, has been kept up to the maximum number authorized by law. It consists of two hundred and thirty-eight members, including officers and privates, as follows, viz :

Major and superintendent.....	1
Captain and inspector .....	1
Lieutenants .....	10
Sergeants .....	20
Privates or patrolmen .....	200
Detectives .....	6
Total .....	238

There are also in the employment of the board, under the authority of law, the following officers :

Secretary of the board .....	1
Property-clerk .....	1
Clerks .....	3
Surgeons .....	3
Messenger .....	1
Laborers .....	9

The board has also commissioned, as authorized by law, seventy-three persons as additional privates to do duty in various localities, at the expense of the parties making application for their appointment.

**DISPOSITION OF THE FORCE.**

At the central office, with duties extending throughout the entire District of Columbia, the following officers are assigned, viz :

Major and superintendent.....	1
Captain and inspector .....	1
One lieutenant, (as hack inspector).....	1
Six detectives .....	6
One lieutenant and four privates as sanitary officers.....	5

For the purposes of a perfect and effective police surveillance, the Dis-

trict of Columbia is divided into eight precincts. Their location and boundaries are as follows, viz :

*First precinct.*—That part of Washington known as “South Washington,” exclusive of the grounds surrounding the Smithsonian Institution, comprises this precinct, and reaches on the north to the former line of the canal, except where it binds on the southern limits of the grounds immediately surrounding the Smithsonian Institution; easterly extends along the line of the canal to where it intersects with South Capitol street, whence said street is the eastern boundary to the Potomac. The Potomac River forms its southern and western boundary.

*Second precinct.*—All of the city of Washington lying north of N and Boundary streets north, and that section of the county of Washington embraced between the Anacostia and Rock Creek, comprise this precinct.

*Third precinct.*—Georgetown, and that section of the county of Washington lying between Rock Creek and the Potomac, together with Anacostan Island, are included in this precinct.

*Fourth precinct.*—That portion of Washington lying west of Fifteenth street and south of N street north is embraced in the fourth precinct.

*Fifth precinct.*—This precinct extends from Seventh to Fifteenth street, northwest, and from the former line of the canal north to H street, and also includes the grounds immediately surrounding the Smithsonian Institution.

*Sixth precinct.*—The extent of this precinct is from H to N street north and south, being bounded on the west by Fifteenth street, and reaching east as far as Seventh street, northwest, and running north along that street from its intersection with G street to New York avenue; thence in a northeasterly direction along New York avenue to N street.

*Seventh precinct.*—The boundaries of this precinct are Seventh street, northwest, from the former line of the canal north to New York avenue, and the line of the canal and Maryland avenue on the south and southeast, and extends north to New York avenue and Boundary street.

*Eighth precinct.*—This precinct includes that part of the city of Washington lying east of the former line of the canal and south of Maryland avenue, from Third street, southwest, to the intersection of the canal with South Capitol street, thence south to the Potomac River, and also that section of the county of Washington lying southeast of the Anacostia River.

To each of these precincts assignments of officers and privates are made as follows, viz :

First precinct—1 lieutenant, 2 sergeants, and 26 privates .....	29
Second precinct—1 lieutenant, 2 sergeants, and 21 privates .....	24
Third precinct—1 lieutenant, 3 sergeants, and 21 privates .....	25
Fourth precinct—1 lieutenant, 2 sergeants, and 22 privates .....	25
Fifth precinct—1 lieutenant, 3 sergeants, and 25 privates .....	25
Sixth precinct—1 lieutenant, 2 sergeants, and 25 privates .....	25
Seventh precinct—1 lieutenant, 3 sergeants, and 30 privates .....	27
Eighth precinct—1 lieutenant, 3 sergeants, and 23 privates .....	23
<b>Total.....</b>	<b>173</b>

Of the above number there are permanent details assigned to special duty as follows, viz :

At the Executive Mansion .....	3
At the police-court .....	2
At the railroad-depots .....	3
At police-headquarters, as telegraph-operators, &c.....	5
At each of the station-houses, (eight in all,) as station-keepers and telegraph-operators, 2 privates.....	15
<b>Total details .....</b>	<b>28</b>

In its last annual report the board of police, referring to the special demands for police service, held language illustrative of the necessity of an increased force for this District, which is applicable at the present time, and as the needed increase was not realized at the last session of Congress, its propriety is again submitted. In fact, an increase of population and wealth, with our onward march in the progress of events, should add greater and more urgent emphasis to that presentation, which was substantially as follows, viz :

Deducting the permanent details from the 200 privates, the maximum number of patrolmen allowed by law, it will be seen that we have but 174 privates remaining for regular patrol-duty. The population of the District, as shown by the census of 1870, is 131,700; and comparing the population with the number of officers, as shown by the last statement, it will be observed that there is an approximate average of one policeman to each 750 of our inhabitants.

There can be no doubt that at the present time our population amounts to fully 150,000, which, divided by 174, the number of active patrolmen, gives one private to every 900 inhabitants, very nearly. And if we take into the estimate the fact that we have constantly in our midst a large number of transient residents, it will be safe to state that we have but one patrolman to each 1,000 inhabitants. It may be well to note that large detachments are continually made from the patrol-force, during the winter season, to attend at public receptions of officers of the Government, foreign ambassadors, prominent citizens, and residents at our capital.

The demands upon the force from these causes are so pressing that frequently it is found necessary to almost entirely uncover our streets, leaving but three or four policemen to guard entire precincts, and that, too, at night, and during a season of the year when police surveillance should be most strict and effective.

It is estimated that, under ordinary circumstances, the numerical strength of a police-force should be one policeman to each 500 inhabitants. This estimate is, however, for densely-populated cities, and would be no fair criterion for population spread out and scattered as within this District, with an incidental population also drawing largely upon the force for the preservation of order on public occasions.

The special design of a police-force is the preservation of order and the prevention of crime. This object can only be attained in proportion as a district is carefully patrolled and guarded in every part by the frequent and almost constant presence of officers. To reach this end, a large force is required in this District of Columbia; and without this, much which is required and expected of the force cannot be accomplished.

As the result of local experience and observation, and information gained in other cities, the board is satisfied that, to secure protection to persons and property, the patrol-force of the District of Columbia should be at least 400 men. As an illustration of the necessity to which we refer, the following statistical information is submitted :

In the city of Washington there are three hundred and thirty miles of streets and alleys to be patrolled. The building-squares, as numbered, of the plat of the city, are 1,170, affording a building-capacity for about 400,000 inhabitants. Besides this there are, within the limits of the city, public grounds and reservations covering an area about one-fourth as great as that of the building-squares referred to. Now, this area is more or less densely occupied by dwellings throughout the entire city-limits, and should be guarded by the police. But, to accomplish this end, by

making such arrangements of the beats of the men as experience teaches is best adapted to secure a thoroughly efficient protection to life and property, would require a force of 800 men. And here let a brief statement show how greatly below the real needs of the service the strength of the present force is. There are 144 privates assigned to active patrol-duty in the city of Washington. One-half of this number, or 72 men only, can be placed on regular duty at night, when the largest force is required. Dividing the number of miles of streets and alleys (330) by the number of men assigned to night-duty, gives each man a beat equal to  $4\frac{7}{12}$  miles in length. In the day-time, for various reasons, the force is frequently less than one-half of that on duty at night, and consequently the beats are more than double in length, or between nine and ten miles long. It is not strange that, under such circumstances, citizens often complain that they cannot see a policeman when wanted. But when it is considered that in these calculations no allowance is made for sickness, absence from other causes, double beats when it is dangerous to send one man alone, attendance at court, &c., the average beats are necessarily much larger, and in the end it will be found that, even with 800 policemen, the District would not be over-supplied.

It may not be inappropriate here to state that the Government employs in the various Departments and public buildings more than one hundred watchmen and police-officers, at a cost not less, probably, than \$100,000. This force is entirely distinct from, and not auxiliary even to, the Metropolitan-police force. The board is not aware of what arrests, if any, are made by the men thus employed, except on occasions when made by such of them as have been commissioned by it as additional privates, or under what particular regulations they are controlled. Of this fact the board feels assured, that the number thus employed and the amount expended in their support merits strict supervision and accountability of their labors. It is respectfully suggested that it would be well to inquire whether the duties devolved upon this class of officers could not be as well, if not better, performed if subjected to the discipline and supervision prescribed by the board for the government of its force.

Whatever is done by these employés it is but reasonable to presume must be in the nature of police-duty. If it be so, then there would seem to be an eminent propriety in their joint alliance with and into the Metropolitan-police system of the District, and be placed under such discipline and surveillance in common as is accorded to all the members of that force.

It is believed that such a unity of forces, if placed under the supervision and held especially accountable to the same executive head, would largely enhance the efficiency and value of the entire police-establishment of the District of Columbia, and exert a valuable moral influence elsewhere. Aside from the benefits that would result from this means of bringing the guards or watchmen of all the present subdivisions in buildings and localities under the same central head, and consolidating their forces into a legion of associated power, the respective heads of Departments would be relieved from numerous importunities in regard to this service, and more free in the undisturbed performance of other duties.

And here it may be added that the present Metropolitan-police force has been in existence over thirteen years, having been organized in September, 1861. Quite a number of the present members of the force were appointed at its organization, and the fact that they are now members is conclusive evidence that they have performed faithful service

during this long term of years. Others have been employed to fill vacancies, as they have occurred from time to time, during these thirteen years. As an unavoidable result, many of these men are becoming advanced in years, as well as old in the service of the board. The exposures and hardships necessary to a policeman's life are gradually but surely undermining the constitutions and health of such members of the force as have served faithfully for a term of years. The efficiency of a few for street-duty is already seriously impaired, and that of others must follow. If the board had the opportunity of assigning such members of the force as become incapacitated for the exposures of street-duty, to posts where they would be less exposed to inclement weather, many years of faithful and efficient service could be utilized in a manner highly advantageous to the Government, not only in a financial view, but to the efficiency of the civil service in this District. It cannot be presumed that Congress would for an instant tolerate a policy which would cast a class of its employes upon the charities of the public, who under the provisions of its laws have given the best part of their lives to the service of the Government, and who have wrecked their physical energies and broken down their healths in the discharge of duties incident to their avocations. It should be borne in mind that the pay of policemen is barely sufficient to support themselves and families, and that being required to devote their time to official duties to an extent which precludes them from engaging in other employment, they have no opportunity to accumulate means to supply the necessaries of life when sickness and old age shall prostrate their energies and hamper their activity. Under the laws of Congress members of this force are appointed for a term co-extensive with good behavior, and can be removed only "for cause." There can be no doubt that the term "for cause" must be construed to mean some voluntary act of omission or commission in the performance of official duty, or some moral delinquency affecting their standing as citizens or members of society. There is, then, or may be, a class of police-officers, who, performing all their moral and official obligations to the satisfaction of the board so far as they come to its knowledge and observation, that become aged or infirm in its service. This class, almost of necessity, must be composed of upright and reliable men. It therefore becomes, and is even now, to some extent, a practical question as to what disposition shall be made of this class of policemen. They cannot be rightfully or legally dismissed the force, and it would be inhuman to do so if it could be done. What, then, can be done, and what should be done, for members of the force whose long term of service, coupled with failing health or advanced years acquired in the line of duty, admonishes us that in no distant future they must become incapacitated for active and efficient street-duty? Either they must become pensionaries or be transferred to posts of duty less subject to exposure and hardship. It is, therefore, earnestly suggested by the board that the policing of the public buildings and grounds could be efficiently, satisfactorily, and economically performed by the class of men in question, under the direction and supervision of this board. With this view, the subject is respectfully submitted for your consideration and recommendation.

#### DISCIPLINE OF THE FORCE.

In the enforcement of discipline and efficiency on the part of the force, charges have been preferred and trials accorded by the board in ninety-four cases, resulting as follows, viz :

Dismissed the force.....	7
Dropped from the rolls.....	1



Reduced to the ranks.....	1
Reprimanded .....	20
Fined.....	8
Cautioned, but complaint dismissed .....	10
Complaints dismissed .....	47

A very satisfactory state of efficiency has been maintained on the part of the force during the past year.

Very few riotous demonstrations have occurred, and none of a grave character, or followed by serious results. Such as have arisen have been promptly quelled. There has also been a marked absence of heinous crimes during the year.

#### STATION-HOUSES.

Little or no improvement has been made since the last report in the station-houses occupied by the force. It is a matter of surprise and regret that the local authorities of the District have permitted some of the buildings occupied as station-houses to remain in their present condition. Two of them have been condemned by the board of health as nuisances, dangerous to life and health. So dilapidated and pestilential had these buildings become, that the board has been compelled to dispense with the reserve force for the precincts in which they are located, for the reason that the health of nearly all the men assigned to those stations was being seriously impaired, and much time was being lost from sickness. A portion of the men in each precinct, while not on active patrol-duty, should remain in reserve at the stations to meet emergencies. This class of duty has been necessarily dispensed with for reasons above stated, and that, too, in a central part of the city of Washington, where the services of such reserves are most in demand. The efficiency and discipline of the force is being greatly impaired by this want of proper station-house accommodations. Nor should the lives and health of unfortunate persons who may be arrested be put in peril by being confined in the unavoidably filthy and noxious cells attached to most of the stations. That the peril of life is imminent in many such cases is certain. It is a matter of daily and almost hourly occurrence that drunken persons, exhausted from debauch and excesses, are brought to station-houses, where for the want of other places of confinement they must be placed in these foul, unventilated cells, oppressively hot in summer, and damp and cold in winter. So overrun with vermin are the most of them, that it is a torture and agony to a prisoner to be confined in them, not to say disgusting to a proper sense of cleanliness, and disgraceful to the capital of our nation. It is a punishment inflicted before conviction, and a torture tolerated only during the Dark Ages. It is a revival and tolerance of the horrors of the black-hole of Calcutta in the capital of the United States of America. This language may seem strong, but it is believed to be justified by the actual condition of many of these cells. The picture is neither overdrawn nor exaggerated. From year to year the board has urged an improvement in the condition of the station-houses, but without results, and the attention of the municipal authorities has been much more frequently drawn to the matter, resulting sometimes in visits of inspection by committees and reports acknowledging the vile condition of the stations and cells, denouncing further neglect as criminal, and their continued use as inhuman. Spasmodic attempts by our legislative councils have been made to provide for the erection of better buildings, but these efforts have always failed.

Congress has by law made it obligatory upon our local authorities to provide station-houses, and warm, light, and cleanse them. This duty has thus far been shamefully neglected by those charged with its performance. Considerations of economy, if prompted by no higher motive, should speedily provide a remedy for this neglect. Much of the time lost by members of the force through sickness is undoubtedly attributable to the condition of the station-houses. Without conveniences for warming, drying, and rest at the stations, the men must, as an unavoidable result, contract sickness and disease, which are followed by loss of time and lack of efficiency.

It is earnestly recommended that an effective remedy be applied to the negligence in this regard, and that an appeal be made to Congress to appropriate the means to provide such station-houses as will be compatible with efficiency and humanity, and make its own terms for reimbursement by the authorities of the District, if Congress is still of the opinion that the citizens of the District shall defray the expense of these establishments.

#### DETECTIVE-CORPS.

The duties of the detective-corps have been very satisfactorily performed during the year. Much valuable property, which has been lost or stolen, has been recovered and restored to owners. Marked success has also resulted from their efforts to ferret out criminals, and furnish evidence for their conviction and punishment. With one or two exceptions, no professional thieves have visited the District for the purpose of plying their vocation; a fact which speaks well for the efficiency and honesty of the corps. Were professional thieves in the habit of making our community a place wherein to despoil our citizens of property, there would be cause to doubt either the efficiency or honesty of this corps. A more detailed account of the operations of the detective-corps will be found in the report of the major and superintendent of the force to this board; a copy of which is appended hereto.

#### POLICE-TELEGRAPH.

During the past few months the board has renewed the lines of the police-telegraph throughout the entire District. This renewal had become absolutely necessary on account of the dilapidated condition of the line, resulting from the wires being attached to chimneys and roofs of houses, instead of poles erected for the purpose. The old line had also been in use nearly twelve years, and, as a consequence, the wires had become corroded and unreliable. The board has also extended its lines to Tennallytown, Brightwood, the Reform-School, and Benning's Station, across the Eastern Branch of the Potomac. All the important objective points within the District are now in communication with police-headquarters by telegraph. The entire line of wire is now attached to poles erected for the purpose. This means of communication is a great saving of time to the force in giving and receiving information from distant points, and thereby adds largely to the efficiency and facility of police-operations. An exhibit of the work performed by this auxiliary will be found in the annexed report of the major and superintendent.

#### LICENSES FOR LIQUOR-SELLING.

Under the provisions of the third section of the act of Congress approved July 23, 1866, the board has made the following disposition of



applications made for the approval of licenses for the retail sale of intoxicating liquors during the past year, viz :

Number of applications made .....	419
Number of applications approved .....	320
Number of applications disapproved .....	99
Number of transfers approved .....	16

The number of applications made this year is one more than last year. The number approved is fifty-one less than last year. The number of disapproved is fifty-two more than last year, and the number of transfers approved is twenty-two less this year than last.

The board embraces this opportunity of again stating, as it has in several previous annual reports, that under the operation of our laws it is found impossible to prevent the sale of intoxicating liquors without license. The better class of saloon-keepers obtain licenses, while a very large number of low shops sell the vilest kinds of liquors without license. Numerous complaints are entered at the police-court, arrests made, and convictions obtained in that court, but in almost every instance an appeal is noted, which must be allowed. The appeal is certified to the criminal court, where it comes before a jury, when from one cause or another an acquittal is the result in most instances. This evil will go on and increase unless some effective and summary process is devised to prevent illicit traffic in intoxicating drinks. Not one nor all the evils combined which afflict this community lead to as much misery, suffering, pauperism, demoralization, and crime as flow from indulgence in intoxicating drinks. And a very large proportion of these lamentable results proceeds directly from dram-shops which dispense liquors not simply in violation but in defiance of law.

An exhibit of the property-operations of the department, together with certain tabulated information and valuable suggestions with reference to the legal disposition of property-waifs, will be found in the report of the property-clerk, appended hereto. The board respectfully invites your consideration of the question of property-waifs, as submitted in its last annual report and referred to in the report of the property-clerk, in the hope that you may perceive such merit as will induce a recommendation for necessary legislation.

Your attention is also respectfully directed to the statement of the accounts of the treasurer of the board, transmitted herewith.

For a more detailed exhibit of the work performed by the force during the year, together with important and valuable tabular and statistical information, attention is called to the report of the major and superintendent of the force.

---

*To the Board of Metropolitan-Police Commissioners :*

GENTLEMEN: I have the honor to submit herewith a report of the operations of the Metropolitan-police force of this District, for the year ending September 30, 1874. This report is confined mainly to tabulated and statistical information, together with a general summary of the duties performed by the force.

The tables submitted herewith show the number and disposition of the force, the time lost by sickness and other causes, the total number of arrests made by the force, classified by precincts, a classification of the ages of the males and females arrested, each separately, the

nativity of persons arrested, a classification of the offenses against the person for which persons have been arrested, and the number arrested for each offense; a similar classification of offenses against property; and, lastly, a table showing the trades and callings of persons arrested.

The following is a summary of the operations of the detective branch of the service so far as they can be made a matter of record. A large part of the service by the detectives is of such a character that no showing can be made of it in a report of this kind. Detectives should exercise the utmost vigilance in preventing crime and making themselves acquainted with criminals and their operations, associates, haunts, &c., &c. It is their special duty, after crimes have been perpetrated, to inquire into all the circumstances attending their execution, and to pursue all proper measures to recover property stolen and to trace out and apprehend criminals, and furnish evidence for their conviction.

The number of robberies reported is .....	695
The number of arrests made .....	512
Amount of property reported lost or stolen .....	\$29,411 49
Amount of property recovered .....	35,954 89
Amount of property turned over to property-clerk .....	10,165 00
Amount of property turned over to owners .....	25,789 89
Amount of property taken from persons and returned to the same .....	2,867 02

The amount of property recovered being greater than that reported lost or stolen is accounted for from the fact that frequently property is recovered without being, or before it is, reported lost or stolen.

The board of health having, under authority of Congress, special charge of the sanitary condition of this District, comparatively little has been done in that line, and that of such a character as required prompt action. But one private has been engaged in the active sanitary work.

The following statement will show the number of sick and destitute persons sent to hospitals and asylums, the number of non-resident paupers furnished with transportation to other cities, the number of broken pumps, hydrants, and dangerous excavations, &c., reported to the District authorities, and the number of notices served for the board of health, including those served by precinct officers:

Number of non-resident paupers furnished with transportation to other cities, procured from governor of District of Columbia .....	28
Number of broken pumps, hydrants, and dangerous excavations, &c., reported to the District authorities .....	100
Number of notices served for board of health .....	1,208

Number of sick and destitute persons sent to hospitals and asylums by the sanitary detail, for the year ending September 30, 1874, was as follows, viz :

To the Washington Asylum .....	205
To the Providence Hospital .....	67
To the Government Hospital for the Insane .....	51
To the Freedmen's Hospital .....	5
To the Columbia Hospital .....	14
To the Children's Hospital .....	2
To the jail hospital .....	1
To the Women's Christian Association Home .....	1
<b>Total</b> .....	<b>346</b>

The nativity of persons sent to the hospitals and asylums is as follows, viz :

United States .....	276
Ireland .....	36
Germany.....	25
England .....	7
Poland.....	1
Canada .....	1
Total .....	346

Miscellaneous duty performed by the sanitary detail during the year is as follows, viz :

Number of persons buried on orders given by the authorities of the District.....	170
Number of helpless persons assisted .....	19
Number of abandoned infants found by officers .....	14

The following is a synopsis of work done by the police-telegraph during the past year. There have been 33,271 messages received and transmitted at the central office, classified as follows :

Number of dead animals reported .....	1,397
Number of dead animals reported to health-office .....	1,467
Number of animals lost and description telegraphed.....	330
Number of vehicles lost and description telegraphed.....	95
Number of children lost and description telegraphed .....	150
Number of animals found and reported.....	240
Number of vehicles reported found .....	92
Number of children reported found.....	123
Number of officers summoned to court.....	160
Number of officers ask to wear citizens' clothes.....	207
Number of prisoners for van .....	4,220
Number of orders issued by major and superintendent.....	220
Number of orders issued by captain and inspector.....	200
Number of orders issued by lieutenants of precincts .....	113
Number of items for reporters.....	1,105
Number of times surgeons sent for .....	64
Number of times coroner has been notified.....	115
Number of alarms of fire .....	30
Number of inquiries for lost persons.....	201
Number of citizens summoned to court.....	235
Number of persons wanted and descriptions telegraphed .....	327
Number of times reserves ordered .....	161
Number of dispatches to and from health-office.....	2,150
Number of dispatches on sanitary business .....	755
Number of dispatches on personal matters.....	4,160
Number of miscellaneous dispatches.....	14,015
	<hr/>
	33,271

A large number have been sent between the different precinct-stations of which no record has been kept at the central office.

#### RECAPITULATION.

The following is a recapitulation of the work done by the police-force during the year ended September 30, 1874, a more extended exhibit of which will be gathered from the following tables.

The whole number of arrests during the year has been 13,192, of which 11,122 were males; 2,070 were females; 4,832 were married; 8,360 were single; 8,361 could read and write; 4,831 could not read and write.

The offenses may be classified as follows: Offenses against the person, 7,592 males; 1,557 females. Offenses against property, 3,530 males; 513 females.

Of the cases reported, the following dispositions have been made: 4,945 were dismissed; 17 were turned over to the military; 1,298 were sent to jail for court; 127 gave bail for court; 1,470 were sent to the work-house; 261 gave security to keep the peace; 50 were sent to the Reform-School; 85 not disposed of, and in 1,310 cases various light punishments have been inflicted, and they have been classed under the head of miscellaneous.

Fines have been imposed in 3,629 cases, amounting in all to \$37,248.25, as follows, viz:

In District of Columbia cases .....	\$14,816 50
In United States cases .....	7,145 75
In District of Columbia cases appealed .....	11,126 00
In United States cases appealed .....	4,160 00
	<hr/>
	37,248 25

INCIDENTAL DUTIES.

The number of destitute persons furnished with lodging has been during the year .....	7,177
Lost children restored to parents .....	176
Sick or disabled assisted or taken to hospitals .....	612
Horses, cattle, or vehicles found astray and restored to owners .....	251
Doors left open and secured by police .....	140
Fires attended in the District .....	163
Accidents reported .....	97
Inquests attended .....	45
Dead and abandoned persons and infants found .....	43
Suicides .....	3
Friendless persons buried on orders given by District authorities .....	154

Very respectfully,

A. C. RICHARDS,  
Major and Superintendent.

No. 1.—Table showing the disposition of the force.

Precincts.	Major and su- perintendent.	Captain and in- spector.	Lieutenants.	Sergeants.	Privates.	Detailed.	Vacancies.	Total.
First .....			1	2	24	2		29
Second .....			1	2	22			25
Third .....			1	3	20	1		25
Fourth .....			1	2	24	1		28
Fifth .....			1	3	23	2		29
Sixth .....			1	2	23			26
Seventh .....			1	3	28	2		34
Eighth .....			1	3	25			29
	1							1
		1						1
Detectives .....					6			6
Sanitary .....			1		3			4
Total .....	1	1	10	20	198	8		238

No. 2.—Table showing time lost by sickness and other causes.

Precincts.	With leave.	Without leave.	Sick.	Days.
First.....	104	10	325	439
Second.....	142	60½	287½	420
Third.....	74	3	294	371
Fourth.....	116	4	233	353
Fifth.....	179	1	510	690
Sixth.....	95	25	690	810
Seventh.....	155	14	558	727
Eighth.....	175	2	454	631
Detectives.....	4	.....	32	36
Sanitary.....	4	.....	33	57
Total.....	1,048	119½	3,416½	4,524

No. 3.—Table showing number of arrests in each precinct.

Precincts.	Males.	Females.	Total.
First.....	1,471	474	1,945
Second.....	1,436	226	1,662
Third.....	1,000	173	1,173
Fourth.....	1,013	155	1,168
Fifth.....	2,018	400	2,418
Sixth.....	720	108	828
Seventh.....	1,780	266	2,046
Eighth.....	1,218	202	1,420
Sanitary.....	20	.....	20
Detectives.....	446	66	512
Total.....	11,122	2,070	13,192

No. 4.—Table showing the ages of the males arrested classified.

Precincts.	From 10 to 20.	From 20 to 30.	From 30 to 40.	40 and over.	Total.
First.....	283	458	215	516	1,471
Second.....	485	460	246	245	1,436
Third.....	157	360	260	203	1,000
Fourth.....	229	324	229	231	1,013
Fifth.....	302	741	534	441	2,018
Sixth.....	132	257	183	148	720
Seventh.....	394	574	454	358	1,780
Eighth.....	309	454	253	207	1,218
Sanitary.....	1	5	8	6	20
Detectives.....	121	196	85	44	446
Total.....	2,407	3,829	2,487	2,389	11,122

No. 5.—Table showing the ages of the females arrested classified.

Precincts.	From 10 to 20.	From 20 to 30.	From 30 to 40.	40 and over.	Total.
First.....	147	156	139	32	474
Second.....	71	83	53	19	226
Third.....	41	45	48	39	173
Fourth.....	29	55	44	27	155
Fifth.....	77	213	66	44	400
Sixth.....	31	39	20	18	108
Seventh.....	35	74	97	60	266
Eighth.....	48	87	36	31	202
Sanitary.....	.....	.....	.....	.....	.....
Detectives.....	18	27	13	8	66
Total.....	497	779	716	278	2,070

## No. 6.—Recapitulation of offenses classified.

Offenses against the person.	Males.	Females.	Total.
Adultery .....	2	2	4
Riots and affray .....	201	8	209
Assault .....	75	19	94
Assault and battery .....	1,419	278	1,697
Assault and battery with intent to kill .....	60	7	67
Assault on policemen .....	46	2	48
Abortion .....	1	2	3
Attempt at rape .....	12	.....	12
Bigamy .....	6	.....	6
Bigamy .....	23	.....	23
Carrying concealed weapons .....	8	.....	8
Contempt of court .....	31	14	45
Disorderly conduct .....	1,022	337	1,359
Escorters .....	22	.....	22
Enticing prostitution .....	.....	1	1
Fast riding or driving .....	50	1	51
Fighting in the streets .....	80	26	106
Fugitives .....	62	3	65
Habitual drunkenness .....	1	2	3
Intoxication .....	2,740	266	3,006
Intoxication and disorderly .....	801	217	1,018
Infanticide .....	.....	3	3
Insanity .....	31	3	34
Indecent exposure of the person .....	47	1	48
Insulting females on the street .....	1	.....	1
Interfering with policemen .....	7	.....	7
Keeping disorderly house .....	3	1	4
Keeping bawdy-house .....	6	30	36
Keeping gambling-house .....	8	.....	8
Miscellaneous misdemeanors .....	83	14	97
Murder .....	9	1	10
Perjury .....	6	.....	6
Profanity .....	87	24	111
Prostitution .....	.....	14	14
Rape .....	6	.....	6
Robbing .....	4	.....	4
Resisting officer .....	53	.....	53
Threats of violence .....	296	100	396
Ungovernance .....	255	170	425
Witness to murder confined in default of security .....	28	11	39
<b>Total .....</b>	<b>7,592</b>	<b>1,557</b>	<b>9,149</b>

## No. 7.—Recapitulation of offenses classified.

Offenses against property.	Males.	Females.	Total.
Arson .....	22	2	24
Attempt at arson .....	2	1	3
Attempt at burglary .....	2	.....	2
Attempt to steal .....	10	.....	10
Burglary .....	33	1	34
Cruelty to animals .....	39	.....	39
Embezzlement .....	15	.....	15
Forgery .....	16	1	17
Fraud .....	5	1	6
Grand larceny .....	176	23	199
Gambling .....	29	2	31
Falicious mischief .....	48	.....	48
Obtaining goods or money under false pretenses .....	65	5	70
Petit larceny .....	783	187	970
Pickpockets .....	1	.....	1
Robbery .....	45	4	49
Receiving stolen goods .....	19	2	20
Suspicion .....	396	33	429
Trespass .....	101	1	102
Violation of corporation ordinances .....	1,721	250	1,971
Violating internal-revenue laws .....	3	.....	3
<b>Total .....</b>	<b>3,530</b>	<b>513</b>	<b>4,043</b>

No. 8.—*Nativity of those arrested classified.*

Nativity.	Number.	Nativity.	Number.
United States, (white) .....	5, 264	Holland.....	2
United States, (colored).....	5, 479	Poland.....	3
Ireland.....	1, 619	Spain.....	1
Germany.....	574	Switzerland.....	4
Italy.....	28	Wales.....	2
England.....	116	Cuba.....	1
France.....	45	Sweden.....	3
Scotland.....	43	Prussia.....	1
Belgium.....	1	Total.....	12, 192
Canada.....	5		
Denmark.....	1		

No. 9.—*Table showing trades and callings of persons arrested.*

Trades.	Number.	Trades.	Number.
Artists.....	3	Gardeners.....	57
Actors.....	14	Gamblers.....	12
Agents.....	106	Gas-fitters.....	3
Apprentices.....	14	Hotel-keepers.....	5
Auctioneers.....	6	Hackmen.....	97
Architects.....	4	Hatters.....	12
Bakers.....	67	Hucksters.....	159
Barbers.....	80	Housekeepers.....	702
Bar-keepers.....	68	Horse-farrier.....	1
Blacksmiths.....	130	Horse-dealers.....	3
Boatmen.....	121	Hostlers.....	10
Boiler-makers.....	13	Harness-makers.....	10
Book-binders.....	15	Iron-worker.....	1
Bell-hanger.....	1	Jewelers.....	12
Brewers.....	12	Junk-shop keepers.....	12
Bricklayers.....	196	Janitors.....	4
Brick-makers.....	21	Laborers.....	4, 114
Brokers.....	8	Loafers.....	12
Brass-finisher.....	1	Lawyers.....	67
Broom-makers.....	2	Lamp-lighters.....	7
Builder.....	1	Livery-stable keepers.....	5
Butchers.....	111	Locksmiths.....	3
Block and pump maker.....	1	Merchants.....	121
Billiard-maker.....	1	Machinists.....	25
Bill-poster.....	1	Magistrates.....	2
Banker.....	1	Millers.....	10
Carpenters.....	404	Member of Congress.....	1
Carpet-cleaner.....	1	Messengers.....	33
Cartmen.....	81	Marines.....	117
Cabinet-makers.....	19	Miners.....	6
Cigar-makers.....	58	Molders.....	32
Coach-makers.....	16	Masons.....	3
Coachmen.....	13	Musicians.....	10
Clock-makers.....	2	Nurse.....	1
Cooks.....	27	Notary public.....	1
Coopers.....	11	Newsboys.....	44
Confectioners.....	10	Occupations unknown.....	267
Contractors.....	74	Oystermen.....	3
Clerks.....	453	Pump-maker.....	1
Conductors.....	3	Paper-hangers.....	3
Chandler.....	1	Potters.....	3
Calkers.....	3	Peddlers.....	5
Car-drivers.....	91	Printers.....	174
Constables.....	14	Physicians.....	57
Dairymen.....	32	Plasterers.....	110
Dentist.....	1	Prostitutes.....	616
Draughtsmen.....	1	Preacher.....	1
Dress-makers.....	2	Paper-maker.....	1
Drivers.....	113	Painters.....	217
Drovers.....	25	Pavers.....	34
Druggists.....	19	Pawnbroker.....	1
Door-keepers.....	2	Police-officers.....	3
Editors.....	3	Photographers.....	3
Engineers.....	38	Publishers.....	2
Engravers.....	8	Porters.....	7
Foremen.....	2	Plumbers.....	57
Farmers.....	122	Restaurant-keepers.....	24
Firemen.....	15	Rag-pickers.....	16
Fishermen.....	17	Railing-maker.....	1
Fruit-dealers.....	4	Rope-makers.....	3
Grocers.....	52	Reporters.....	21



No. 8.—Table showing trades and callings of persons arrested—Continued.

Trades.	Number.	Trades.	Number.
Beggars .....	3	Stewards .....	3
Sailors .....	207	Tailors .....	79
Soldiers .....	155	Teamsters .....	99
Sail-maker .....	1	Tinners .....	66
Servants .....	710	Telegraphists .....	2
Shoe-makers .....	114	Thieves .....	589
Shoe-blacks .....	78	Upholsterers .....	31
Spring-maker .....	1	Umbrella-maker .....	1
Stone-cutters .....	143	Undertakers .....	2
School-masters .....	8	Vagrants .....	94
Store-keepers .....	126	Washer-women .....	23
Housemen .....	4	Wheelwrights .....	11
Saddlers .....	18	Watchmen .....	42
Students .....	341	Wagon-masters .....	3
Surveyor .....	1	Weavers .....	5
Savengers .....	3	Walters .....	14
Seamstresses .....	6	Whitewashers .....	5
Sexton .....	1	Wood-cutter .....	1
Ship-carpenters .....	8		
Silversmith .....	1	Total .....	13, 192

DEPARTMENT OF METROPOLITAN POLICE,  
Office of Treasurer, Washington, October 20, 1874.

To the Board of Police :

In the act making appropriations for sundry civil expenses of the Government, approved March 3, 1873, in which was an appropriation for the expenses of the Metropolitan Police, there was a provision transferring the supervision thereof from the Secretary of the Interior to the Attorney-General, which also charged that officer with the disbursement of that appropriation. By reason of that legislation no public moneys passed through this office during the year ending June 30, 1874.

A statement of the condition of the "policemen's fund" from January 1, 1873, the date of my election as Treasurer, to the 30th ultimo, with the report of your committee of audit, is herewith respectfully submitted.

H. M. SWEENEY,  
Treasurer.

DEPARTMENT OF METROPOLITAN POLICE,  
OFFICE OF MAJOR AND SUPERINTENDENT,  
No. 482 Louisiana Avenue, Washington, September 30, 1874.

Total amount of money advanced by the treasurer of the board of police. \$7, 220 49  
By cash paid back..... 4, 452 72

Leaving a balance of ..... 2, 767 77

ASSETS.

Cash on hand ..... \$2, 042 63  
Due for cloth..... 37 34  
Goods and remnants..... 862 53  
Due packing-box ..... 7 00

2, 949 50  
2, 767 77

Increase cloth-fund in cloth ..... 181 73

The above is correct.

The Board of Metropolitan Police in account with H. M. Sweeny, treasurer, on account of the policemen's fund, from January 1, 1873, to September 30, 1874.

Dr.				Cr.		
Date.	Disbursements, &c.	No. of voucher.	Amount.	Date.	Advances, &c.	Amount.
1873.				1873.		
Feb. 2	To Mrs. Ch. L. Boorman...	1	\$75 00	Jan. 1	By cash .....	\$4,221 77
5	To Mrs. E. B. Hickman....	2	75 00	1	By U. S. bonds.....	5,000 00
22	To Mrs. Jeff Robinson ....	3	75 00			
Oct. 24	To Mrs. J. W. Franklin ...	4	75 00	1874.		
1874.				Sept. 30	By sale of \$1,000 U. S. 5-20 bonds at 12 cts. ....	1,120 00
Feb. 12	To John Kane .....	5	10 00	30	By sales of gold .....	506 40
Mar. 13	To Mrs. A. Kneas .....	6	75 00	30	By property sales .....	440 75
25	To Mrs. G. W. Frazier ....	7	75 00	30	By fines for loss of time, &c..	267 14
May 18	To purchase of \$1,000 U. S. 5 20 bonds at 17½ cts ..	8	1,172 50	30	By fines of board.....	200 00
Sept. 3	To Mrs. Robert Fleet .....	9	75 00	30	By rewards .....	87 70
			1,707 50			11,844 14
	Unexpended balance.....		10,136 64			
			11,844 14		By balance.....	10,136 64

Bonds .....	\$5,000 00	Correct.
Cash in hands of captain and inspector ...	2,287 13	Correct, as shown by certificate of captain and inspectors.
Cash in hand of treasurer .....	2,849 51	Correct.
	10,136 64	

The undersigned, the committee appointed at the last meeting of the Board of Metropolitan Police, to audit the account of the treasurer of the board with the policemen's fund, respectfully report that they have personally examined the treasurer's vouchers and other evidences of credit to him, and the bonds, cash, and other evidences of debit to him, and found them correct in accordance with this statement, bearing date September 30, 1874.

We recommend that the treasurer be authorized by the board to invest such portions of the cash now in his hands belonging to the policemen's fund as shall seem to him suitable in view of the necessity of keeping a proper amount of cash on hand to purchase cloth for policemen's clothing, either in United States bonds, or in bonds guaranteed by the United States.

C. H. NICHOLS,  
JAMES G. BERRET,  
*Auditing Committee.*

Report of property-clerk.

DEPARTMENT OF METROPOLITAN POLICE,  
Property rooms, Washington, October 12, 1874.

SIR: I have the honor to transmit herewith tabular statements showing the property operations of the department during the year ending September 30 ultimo, as reported to this office.

There was received at this office property valued at \$19,827.69, of which \$9,645.77 was returned from the several precincts and sanitary

office, and \$10,181.92 from the office of the detective corps. The aggregate deliveries to claimants, on orders of courts and other evidences of ownership, amounted to \$17,393.33, of which \$7,393.65 had been returned from the patrol and sanitary forces and \$9,999.68 from the detective service. (See Statement A.)

Statement B exhibits, by months, the entire property operations of the department other than that which passed through this office by reason of contest or other operations of law, and amounted to \$132,201.23. Thus it will be seen that property to the aggregate amount of \$152,028.92 came into the department; that during the same time \$149,594.56 was restored to claimants, leaving a sum equal to \$2,434.36 undisposed of.

The sale of abandoned and unclaimed property held more than six months, made the 1st of July last, produced \$158.41 net, which was returned to the treasurer of the board.

In its last annual report the board of police submitted to the Department of Justice the propriety of specific legislation for governing the disposition of lost property-waifs. It does not admit of a doubt that the establishment of a central depot connected with this office or elsewhere, where every article of value that may be lost and found shall be deposited for the benefit of its owner, must be of public service. But, as the laws now are, with the laxity of morals existing with regard to the proprietary rights of the real owners of such property, it is respectfully reiterated and submitted, that stringent laws, requiring the prompt surrender and return to a central depot of all property-waifs found by any person within the police district, under a penalty of a charge of larceny, would have a salutary influence in lessening crime, and be, at the same time, a great public convenience.

Very respectfully, your obedient servant,  
GEO. R. HERRICK,  
Property Clerk.

WM. J. MURTAGH, Esq.,  
President Board of Police.

A.—Statements exhibiting the value of property and money received at the office of the property-clerk and delivered therefrom during the year ending September 30, 1874.

Estimated amounts received in each month :	
1873.	
October .....	\$635 50
November .....	1,834 75
December .....	948 27
1874.	
January .....	8,257 00
February .....	764 75
March .....	783 65
April .....	705 10
May .....	890 50
June .....	1,507 85
July .....	503 00
August .....	1,514 47
September .....	1,482 85
Total receipts .....	19,827 69

## Amounts delivered on orders of courts and evidences of ownership:

1873.	
October.....	\$51 00
November.....	717 00
December.....	392 95
1874.	
Jannary.....	1,768 75
February.....	875 00
March.....	8,106 95
April.....	545 50
May.....	454 25
June.....	2,027 50
July.....	448 68
August.....	1,120 75
September.....	865 00
Total delivered.....	<hr/> 17,393 33

irely, and delivered to others than the property-clerk, during the year ending September 30, 1874, as compiled from the weekly reports to that office.

H. E. 7

Months and years.	Precincts.								Detective corps.	Sanitary company.	Total amounts.
	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.			
October, 1873	\$175 60	\$1, 850 12	\$1, 103 48	\$760 19	\$3, 264 88	\$609 51	\$710 11	\$992 25	\$499 05	\$39 75	\$10, 004 94
November, 1873	1, 062 47	892 19	635 63	690 00	2, 353 98	359 51	1, 965 90	270 05	1, 735 35	.....	9, 965 08
December, 1873	839 15	2, 119 02	2, 392 74	2, 197 74	2, 762 72	88 53	867 68	4, 367 73	2, 989 00	6 00	18, 630 36
January, 1874	845 25	1, 052 69	904 76	2, 743 15	984 00	841 57	447 09	259 70	2, 267 50	10 15	8, 355 86
February, 1874	145 55	1, 413 20	417 96	873 75	877 94	1, 260 32	5, 368 80	272 70	4, 103 29	.....	14, 733 51
March, 1874	593 83	1, 340 42	207 40	567 10	1, 483 28	1, 074 27	702 98	1, 666 57	6, 245 00	.....	13, 880 85
April, 1874	137 00	791 28	800 55	168 10	1, 583 85	405 95	1, 036 90	611 70	2, 102 00	.....	7, 637 53
May, 1874	324 72	1, 109 16	524 73	680 33	1, 331 35	389 40	2, 066 75	337 25	330 00	.....	7, 093 69
June, 1874	1, 089 90	915 52	973 23	777 60	4, 750 41	113 47	444 85	2, 470 86	2, 527 35	.....	14, 063 19
July, 1874	397 75	1, 057 01	659 77	757 03	2, 028 36	334 45	540 69	451 95	997 00	6 95	7, 230 96
August, 1874	368 42	2, 366 45	1, 321 13	359 44	1, 838 82	974 33	1, 462 91	1, 956 60	3, 327 62	.....	13, 995 73
September, 1874	311 33	667 14	865 05	176 07	1, 438 85	595 50	468 11	637 86	1, 449 83	.....	6, 609 74
Total.....	6, 310 97	15, 574 20	10, 806 43	8, 750 50	24, 698 44	7, 076 86	16, 082 77	14, 295 22	28, 572 98	62 85	132, 201 23

